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40 CFR Parts 260 and 261
Conditional Exclusions From Solid Waste and Hazardous Waste for Solvent-Contaminated Wipes; Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 260 and 261 [EPA–HQ–RCRA–2003–0004; FRL–9838–2] RIN 2050–AE51

Conditional Exclusions From Solid Waste and Hazardous Waste for Solvent-Contaminated Wipes

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA or the Agency) is publishing a final rule that modifies its hazardous waste management regulations for solvent-contaminated wipes under the Resource Conservation and Recovery Act. Specifically, this rule revises the definition of solid waste to conditionally exclude solvent-contaminated wipes that are cleaned and reused and revises the definition of hazardous waste to conditionally exclude solvent-contaminated wipes that are disposed. The purpose of this final rule is to provide a consistent regulatory framework that is appropriate to the level of risk posed by solvent-contaminated wipes in a way that maintains protection of human health and the environment, while reducing overall compliance costs for industry, many of which are small businesses.

DATES: This final rule is effective on January 31, 2014.

ADDRESSES: EPA has established a docket for this action under Docket ID No. EPA–HQ–RCRA–2003–0004. All documents in the docket are listed on the www.regulations.gov Web site. Although listed in the index, some information is not publicly available, *e.g.,* Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically at www.regulations.gov or in hard copy at the OSWER Docket, EPA/DC, EPA West, Room 3334, 1301 Constitution Ave. NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m. Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room and the OSWER Docket is 202–566–1744.

FOR FURTHER INFORMATION CONTACT: For more detailed information on specific aspects of this rulemaking, contact Amanda Kohler, Office of Resource Conservation and Recovery, Materials Recovery and Waste Management Division, MC 5304P, Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460 at (703) 347–8975 (*kohler.amanda@epa.gov*).

SUPPLEMENTARY INFORMATION:

A. Does this action apply to me?

Entities potentially affected by today's action include an estimated 90,549 facilities in 13 economic sub-sectors that generate solvent-contaminated wipes, which include printing, publishing, business services, chemical and allied product manufacturing, plastics and rubber, fabricated metal products, industrial machinery and equipment, furniture and fixtures, auto dealers, military bases, electronics and computer manufacturing, transportation equipment, and auto repair and maintenance. EPA (or the Agency) also estimates that 3,730 solid waste management facilities and 359 industrial laundries and dry cleaners will be affected by the final rule. In addition, approximately, 2.2 billion solvent-contaminated wipes generated and handled annually by these entities may be affected.

Today's action is expected to result in net benefits estimated at between $21.7 million and $27.8 million annually (2011 dollars), including $18.0 million per year in net regulatory cost savings to these industries. More detailed information on the potentially affected entities and industries, as well as the economic impacts of this rule, is presented in section XI.A of this preamble and in the ''Regulatory Impact Analysis for Conditional Exclusions from Solid and Hazardous Waste for Solvent-Contaminated Wipes'' available in the docket for this final rule.

B. Why is EPA taking this action?

Today's final rule resolves, at the federal level, long-standing issues associated with the management of solvent-contaminated wipes by providing consistency in the regulations governing solvent-contaminated wipes across the United States. This rule maintains protection of human health and the environment, while creating flexibility and reducing compliance costs for generators of solvent-contaminated wipes. Finally, this rule is the Agency's final response to rulemaking petitions filed by the Kimberly-Clark Corporation and the Scott Paper Company.

Acronyms

CAA Clean Air Act
CESQG Conditionally Exempt Small Quantity Generator
CFR Code of Federal Regulations
CMTP Composite Model for Leachate Migration with Transformation Products
CSI Common Sense Initiative
CWA Clean Water Act
DAF Dilution and Attenuation Factors
DOT Department of Transportation
ELLR Estimated Landfill Loading Rates
EPA Environmental Protection Agency
FR **Federal Register**
HSWA Hazardous and Solid Waste Amendments
HQ Hazard Quotient
IRIS EPA's Integrated Risk Information System
LFCR Landfill Coupled Reactor Model
LQG Large Quantity Generator
MSWLF Municipal Solid Waste Landfill
NODA Notice of Data Availability
NPDES National Pollutant Discharge Elimination System
OMB Office of Management and Budget
OSHA U.S. Department of Labor's Occupational Safety and Health Administration
POTW Publicly Owned Treatment Works
RB–MLL Risk-based Mass Loading Limits
RCRA Resource Conservation and Recovery Act
SQG Small Quantity Generator
TC Toxicity Characteristic
TCLP Toxicity Characteristic Leaching Procedure

Preamble Outline

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I. Statutory Authority

These regulations are promulgated under the authority of sections 2002, 3001–3010 and 7004 of the Solid Waste Disposal Act of 1965, as amended by the Resource Conservation and Recovery Act of 1976 (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA), 42 U.S.C. 6912, 6921–6930, and 6974. These statutes, combined, are commonly referred to as ''RCRA.''

II. Summary of Final Rule

In today's rule, EPA is conditionally excluding from the definition of solid waste solvent-contaminated wipes that are cleaned and reused (hereafter referred to as ''reusable wipes'') and excluding from the definition of hazardous waste solvent-contaminated wipes that are disposed (hereafter referred to as ''disposable wipes'').[1] Solvent-contaminated wipes include wipes that, after use or after cleaning up a spill, either (1) contain one or more of the F001 through F005 solvents listed in 40 CFR 261.31 or the corresponding P- or U-listed solvents found in 40 CFR 261.33; (2) exhibit a hazardous characteristic found in 40 CFR part 261 subpart C when that characteristic results from a solvent listed in 40 CFR part 261; and/or (3) exhibit only the hazardous waste characteristic of ignitability found in 40 CFR 261.21 due to the presence of one or more solvents that are not listed in 40 CFR part 261.

The exclusions are only applicable to the solvent-contaminated wipes themselves. Free liquid spent solvent would still be considered solid waste and potentially subject to the hazardous waste regulations under RCRA Subtitle C upon removal from the solvent-contaminated wipe or from the container holding the wipes. In addition, the exclusions are not applicable to wipes that contain listed hazardous waste other than solvents, or exhibit the characteristic of toxicity, corrosivity, or reactivity due to contaminants other than solvents (such as metals). Furthermore, solvent-contaminated disposable wipes that are hazardous waste due to the presence of trichloroethylene are not eligible for the exclusion from hazardous waste and remain subject to all applicable hazardous waste regulations.[2]

Under the final rule, reusable and disposable solvent-contaminated wipes are excluded from regulation under RCRA Subtitle C provided certain conditions are met. Specifically, both types of the wipes, when accumulated, stored, and transported, must be contained in non-leaking, closed containers. The containers must be able to contain free liquids, should free liquids occur, and the containers must be labeled ''Excluded Solvent-Contaminated Wipes.'' The solvent-contaminated wipes may be accumulated by the generator for up to 180 days prior to being sent for cleaning or disposal. At the point of transport for cleaning or disposal, the solvent-contaminated wipes and their containers must contain no free liquids as determined by the Paint Filter Liquids Test (EPA Methods Test 9095B). Generators must maintain documentation that they are managing excluded solvent-contaminated wipes and keep that documentation at their sites. Lastly, the solvent-contaminated wipes must be managed by one of the following types of facilities:

- An industrial laundry or a dry cleaner that discharges, if any, under sections 301 and 402 or section 307 of the Clean Water Act (CWA));
- A municipal solid waste landfill that is regulated under 40 CFR part 258, including § 258.40, or a hazardous waste landfill regulated under 40 CFR parts 264 or 265; or
- A municipal waste combustor or other combustion facility that is regulated under section 129 of the Clean Air Act (CAA); a hazardous waste combustor regulated under 40 CFR parts 264 or 265, or a hazardous waste boiler or industrial furnace regulated under 40 CFR part 266 subpart H.

(These facilities that can receive reusable and disposable wipes under today's rule are collectively referred to as ''handling facilities.'')

III. History of This Rulemaking

A. Description of Solvent-Contaminated Wipes

Wipes come in a wide variety of sizes and materials to meet a broad range of applications. For the purposes of this final rule, EPA is distinguishing between two categories of wipes: Reusables, which are laundered or dry cleaned and used again; and disposables, which are disposed in a landfill or combustor. In the November 2003 proposal, we estimated the respective annual market share of 88 percent for reusable wipes and 12 percent for disposable wipes (68 FR 65613).

Wipes are used in conjunction with solvents by tens of thousands of facilities in numerous industrial sectors for cleaning and other purposes. Printers, automobile repair shops, and manufacturers of automobiles, electronics, furniture, and chemicals, to name a few, use large quantities of wipes, but practically every industrial sector uses wipes in conjunction with solvents. The types and amount of solvents applied to wipes varies considerably; sometimes the amount of solvent used on each wipe is small, but other times it may be two or more times the weight of the dry wipe. Also, some facilities use small numbers of wipes on a daily basis, while others use hundreds, if not thousands of wipes per day.[3] Finally, the types and concentration of solvent used is often unique to the facility. Most often, the solvents used represent a blend of two or more chemicals. Some of these spent solvents are hazardous because of their toxicity or ignitability, whereas others have been listed by EPA as a hazardous waste when discarded (*i.e.*, F001–F005 listed solvents found in 40 CFR 261.31 or the corresponding P- or U-listed solvent found in 40 CFR 261.33).

A generator's decision to use a certain type of wipe depends primarily on its processes. For example, the amount of lint a wipe generates can play a very significant role in deciding whether to use disposable or reusable wipes. Some processes, such as those in electronics and printing applications, cannot tolerate any lint, whereas other processes, such as cleaning auto parts, can tolerate large amounts of lint. Absorbent capacity is also another factor in some processes, as is durability of a wipe in both retaining its structural integrity and its ability to withstand strong solvents. Another factor a generator may use in making its decision is its waste management strategy: For example, choosing to use reusable wipes to reduce the amount of waste it disposes.

As with other commodities, a wipe's life cycle depends on its ultimate disposition. The following description illustrates generally how wipes are used, but is not exhaustive of all possibilities.

- Reusable wipes tend to be standardized in composition (*e.g.*, cotton) and size and are part of a systematic handling system. In general, a laundry owns the reusable wipes, rents them to its customers, and collects them for laundering on a regular basis. Customers receive deliveries of wipes from the laundries, use them, and accumulate the used wipes. Drivers, most often employed by the laundries, pick up the contaminated wipes, replacing them with clean wipes at the same time, and then return the contaminated wipes to the laundry. Once at the laundry, the wipes are counted to ensure the laundry is getting back from the customer the same

[1] A summary chart providing an overview of the conditional exclusions for reusable wipes and disposable wipes is available in the docket for today's rule.

[2] Although wipes contaminated with trichloroethylene are not eligible for the exclusion for disposable wipes, these wipes are eligible for the exclusion for reusable wipes because, under the reusable wipe exclusion, these wipes are not solid wastes subject to hazardous waste regulation, including the TC regulations.

[3] Technical Background Document, August 2003. Docket No. EPA–HQ–RCRA–2003–0004–0003

number sent out. Finally, the wipes are cleaned before being returned to service.

• Disposable wipes are diverse in composition and size (*e.g.,* paper towels, cloth rags). Some disposable wipes arrive dry, whereas others are packaged already containing the solvent and, therefore, are ready for use immediately. Either way, the wipe is used and then often discarded. These wipes are typically disposed of either in a landfill or by combustion.

Solvent removal and recovery can happen at various points in the life cycle of both disposable and reusable wipes. Generators may choose to recover solvent either to reduce virgin solvent use and reduce costs or to reduce their environmental footprint. Generators may generally recycle solvents within their allowed accumulation period (*e.g.,* 90 or 180 days) without a RCRA permit under the provisions of 40 CFR 261.6(c), which exempts the recycling process itself from certain hazardous waste regulations. In addition, laundries or dry cleaners may recover solvents from the solvent-contaminated wipes that arrive at their facilities to minimize the amount of solvent in their effluent in order to comply with pretreatment requirements imposed by a Publicly Owned Treatment Works (POTW) or to recover solvent, which can be sold, refined and reused.

B. Petitions From Industry and the 1994 Shapiro Memo

After the initial promulgation of the federal hazardous waste regulations in May 1980, EPA began receiving inquires from makers and users of disposable wipes, who stated that the hazardous waste regulations were too stringent for solvent-contaminated wipes based on the risks they pose. Then, in 1985, EPA received a rulemaking petition, pursuant to 40 CFR 260.20, from the Kimberly-Clark Corporation, a manufacturer of disposable wipes, that requested EPA exclude disposable wipes from the definition of hazardous waste. The petition argued that these materials are over-regulated because the amount of solvent in the wipes is insignificant and because the disposable wipes do not pose a threat to human health and the environment even when disposed of in a municipal solid waste landfill. In 1987, EPA received a second rulemaking petition from the Scott Paper Company that reiterated many of the same arguments made by the Kimberly-Clark Corporation and added arguments that the hazardous waste regulations were not necessary because solvent-contaminated disposable wipes are handled responsibly, make up just one percent of a generator's waste stream, and could be beneficial to the operation of incinerators because of their heat value.

In addition to these petitions from the makers of disposable wipes, in 1987, EPA received a rulemaking petition from the Alliance of Textile Care Associations requesting that solvent-contaminated reusable wipes be excluded from the definition of solid waste.[4] However, in 2000, the Alliance withdrew their petition.

A rule addressing both types of wipes is important because generators of solvent-contaminated wipes have asked EPA over the years to clarify our position on both disposable and reusable wipes. In the early 1990s, EPA developed a policy that deferred determinations and interpretations regarding the regulation of solvent-contaminated wipes to the states authorized to implement the federal hazardous waste program or to the EPA region, where a state is not authorized (see ''Industrial Wipers and Shop Towels under the Hazardous Waste Regulations,'' Michael Shapiro, February 14, 1994).[5] At that time, the Office of Solid Waste concluded that these determinations were best addressed by the regulatory officials responsible for implementing the regulations.[6]

This policy has led to the application of different regulatory schemes for both types of wipes in the EPA regions and states. Although the states differ in the details of their policies, in general, they regulate disposable wipes as hazardous waste when they are contaminated with a solvent that either meets a hazardous waste listing or exhibits a hazardous waste characteristic. On the other hand, 45 [7] states have provided regulatory relief for solvent-contaminated reusable wipes sent to an industrial laundry or other facility for cleaning and reuse. In about half the cases, the states have excluded reusable wipes from the definition of solid waste, whereas the other states have excluded them from the definition of hazardous waste.

For reusable wipes, the conditions for the various exclusions vary from state to state, but most require that the wipes contain no free liquids and require that the laundry discharge to a POTW or have a permit for discharge under the CWA. Some states have established other requirements, such as requiring generators to manage solvent-contaminated wipes according to the hazardous waste accumulation standards prior to laundering and to file a one-time notice under the land disposal restriction program (see 40 CFR part 268) when such wipes are sent to be laundered.

The EPA policy laid out in the 1994 Shapiro memo has led to confusion because the regulations and policies differ from state to state. One goal of today's rule is to establish consistent federal regulations to reduce this confusion. Thus, today's rule supersedes the 1994 Shapiro memo. See section X for more information on how this rule affects existing state policies.

In late 1994, EPA's policy regarding solvent-contaminated wipes came under further review as part of the Common Sense Initiative (CSI) for the printing industry (59 FR 27295). The CSI committee sought the insight and input of multiple stakeholders on how to make environmental regulation more easily implementable and/or less costly, while still maintaining protection of human health and the environment. The one significant problem posed by the RCRA hazardous waste regulations that was identified by the representatives from the printing industry was the ambiguity of the regulations applicable to solvent-contaminated wipes. Specifically, printing industry representatives requested that EPA do three things: (1) Clarify the definition of ''treatment'' as it pertains to printers wringing solvent from their wipes; (2) examine whether disposable wipes are over-regulated; and (3) increase regulatory consistency among the states.

C. Summary of November 2003 Proposal

To address stakeholder concerns about the Agency's (and states') current policies regarding solvent-contaminated wipes and to ensure greater consistency in regulation, EPA published a proposed rule that would exclude reusable wipes from the definition of solid waste and exclude disposable wipes from the definition of hazardous waste, provided certain conditions were met (68 FR 65586, November 20, 2003).

Specifically, EPA proposed to exclude from the definition of solid waste reusable wipes that are laundered or dry-cleaned when they contain an F-listed spent solvent, a corresponding P- or U- listed commercial chemical product, or when they exhibit the hazardous characteristic of corrosivity,

[4] A copy of all three petitions can be found in the docket for today's rule.

[5] This memo can be found in RCRA Online, Number 11813 and in the docket for today's rule.

[6] The Office of Solid Waste has been renamed the Office of Resource Conservation and Recovery.

[7] In comments submitted on the 2003 proposal, the Maine Department of Environment noted that the EPA Technical Background Document inaccurately reports that Maine excludes reusable solvent-contaminated wipes when in fact Maine regulates all wipes contaminated with F-listed solvents as hazardous wastes.

reactivity, or toxicity when that characteristic results from the F-listed spent solvent or corresponding P- or U-listed commercial chemical product.[8] The reusable wipes would have to be accumulated, stored, and managed in non-leaking, covered containers and, if transported off-site, would have to be transported in containers designed, constructed, and managed to minimize loss to the environment. Additionally, the solvent-contaminated wipes could not contain free liquids or would have to be treated by solvent extraction. Any liquids removed from the solvent-contaminated wipes would be managed according to the regulations found under 40 CFR parts 261 through 270. EPA also proposed that if free liquids are in containers that arrive at a laundry or dry cleaner, the receiving facility would either remove the free liquids and manage them according to the hazardous waste regulations or return the closed container with the wipes and free liquids to the generator as soon as reasonably practicable. The Agency proposed that industrial laundries and dry cleaners could dispose of sludge from cleaning solvent-contaminated wipes in solid waste landfills if the sludge does not exhibit a hazardous waste characteristic.

EPA also proposed to exclude from the definition of hazardous waste disposable wipes when they contain an F-listed spent solvent, a corresponding P- or U-listed commercial chemical product, or when they exhibit the hazardous characteristic of corrosivity, reactivity, or toxicity when that characteristic results from the F-listed spent solvent or corresponding P- or U-listed commercial chemical product. The disposable wipes would have to be accumulated, stored, and managed in non-leaking, covered containers and, if transported off-site, would have to be transported in containers designed, constructed, and managed to minimize loss to the environment. The containers also would have to be labeled ''Exempt Solvent-Contaminated Wipes.'' If the solvent-contaminated wipes were sent to a municipal waste combustor or other combustion facility, the wipes could not contain free liquids or would have to be treated by solvent extraction. Any liquids removed from the wipes would have to be managed according to the regulations found under 40 CFR parts 261 through 270. If the solvent-contaminated wipes were sent to a municipal waste landfill or other non-hazardous waste landfill that meets the standards under 40 CFR part 257 subpart B, each wipe could not contain more than five grams of solvent or would have to be treated by solvent extraction.[9] Additionally, EPA proposed to make 11 solvents ineligible for the conditional exclusion based on the results of the risk screening analysis conducted for the November 2003 proposal and based on the fact that six of the solvents are included in EPA's Toxicity Characteristic (TC) regulations.[10]

EPA also proposed to allow intra-company transfers of both reusable and disposable wipes for the purpose of removing sufficient solvent from the solvent-contaminated wipes in order to meet the ''no free liquids'' condition (for wipes sent to combustors, laundries, or dry cleaners) or so that each wipe would contain less than five grams of solvent (for wipes sent to landfills). The Agency also proposed definitions for ''disposable industrial wipes,'' ''industrial wipe,'' industrial wipe handling facility,'' intra-company transfer of industrial wipe,'' ''no free liquids,'' ''reusable industrial wipe,'' and ''solvent extraction.''

D. Risk Analysis

1. Risk Screening Analysis for the November 2003 Proposed Rule

In the November 2003 proposed rule, EPA evaluated the appropriate regulatory status for solvent-contaminated wipes by considering the risks to human health and the environment from the management of solvent-contaminated wipes and wastewater treatment sludge from laundries (laundry sludge) in unlined non-hazardous waste landfills. This was done by conducting a risk screening analysis to determine the constituent-specific risks from landfilling solvent-contaminated wipes and laundry sludge contaminated with the F001–F005 listed solvents.[11] We estimated the potential risks from exposure to the F001–F005 listed solvents, assuming disposal in an unlined solid waste landfill. We examined potential risks from inhalation of spent solvents volatilizing from the landfill, from ingestion of groundwater contaminated by spent solvents leaching from the landfill, and from inhalation of spent solvent vapors released from contaminated groundwater during showering. The Technical Background Document for the proposed rule provides details on the risk screening analysis conducted in support of the November 2003 proposed rule and is available in the docket for this rulemaking.

Based on the 2003 risk screening analysis, we proposed that solvent-contaminated wipes containing 19 of the 30 solvents could be disposed in an unlined landfill if the wipes met a dry standard (*i.e.,* each wipe contained less than five grams of solvent). EPA also tentatively concluded that solvent-contaminated wipes containing any of the other 11 solvents would continue to be regulated as hazardous waste when disposed, because these solvent-contaminated wipes could pose a substantial hazard to human health and the environment if disposed in an unlined landfill. Six of the eleven solvents did not pose an unacceptable risk in the 2003 risk screening analysis; however, these six were deemed ineligible for the exclusion because they are included in the TC regulations in 40 CFR 261.24. Based on the results of the 2003 risk screening analysis, we also proposed that municipal waste combustors and other combustion facilities be allowed to burn solvent-contaminated wipes that meet the proposed conditions for the exclusion from the definition of hazardous waste.

2. Revised Risk Analysis and October 2009 NODA

During the comment period on the November 2003 proposed rule, we received substantive comments on the risk screening analysis and the solvent loading calculations. In addition to public comments, we received comments from external peer reviewers. Both the public and the peer reviewers questioned aspects of the 2003 risk screening analysis and the modeling assumptions. (These comments are available in the docket for today's final rule.) After reviewing the comments, we

[8] The Agency stated in the preamble that solvent-contaminated wipes co-contaminated with ignitable waste would remain eligible for the exclusion because the solvent-contaminated wipes are already likely ignitable and this risk would be managed by the conditions of the exclusion (68 FR 65602). However, EPA had not made this clear in the proposed regulatory language on 68 FR 65619. This was noted by commenters and is addressed in today's final rule.

[9] Under the proposed rule, a solvent-contaminated wipe that contained less than five grams of solvent would be considered ''dry.''

[10] These 11 solvents include 2-Nitropropane, Nitrobenzene, Methyl ethyl ketone, Methylene chloride, Pyridine, Benzene, Cresols, Carbon tetrachloride, Chlorobenzene, Tetrachloroethylene, and Trichloroethylene.

[11] The solvents listed in F001 through F005 in 40 CFR 261.31 are 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1,2-Trichloro-1,2,2-trifluoroethane, ortho-Dichlorobenzene, 2-Ethoxyethanol, 2-Nitropropane, Acetone, Benzene, n-Butyl alcohol, Carbon disulfide, Carbon tetrachloride, Chlorinated Fluorocarbons, Chlorobenzene, Cresols, Cyclohexanone, Ethyl acetate, Ethyl benzene, Ethyl ether, Isobutanol, Methanol, Methyl ethyl ketone, Methyl isobutyl ketone, Methylene chloride, Nitrobenzene, Pyridine, Tetrachloroethylene, Toluene, Trichloroethylene, Trichlorofluoromethane, Xylene.

decided to undertake a more robust risk analysis to determine the potential risk from disposal of solvent-contaminated wipes and laundry sludge in both unlined and lined non-hazardous waste landfills, including municipal solid waste landfills (MSWLFs). This revised risk analysis was subjected to external peer review and presented for public comment, along with the peer review comments and EPA's response to those comments, in a Notice of Data Availability (NODA) on October 27, 2009 (74 FR 55163).

The 2009 revised risk analysis is considered to be ''influential scientific information'' under both EPA's and the Office of Management and Budget's (OMB's) peer review policies. As described in the October 2009 NODA, we conducted an external peer review in which we asked the peer reviewers to conduct a comprehensive review of the risk analysis. The Agency asked the peer reviewers to respond to a set of questions, which are included in the public docket for this rule, addressing the technical basis of the approaches we used and to prepare a report highlighting their comments and recommendations. EPA revised the risk documents by incorporating the peer reviewers' comments, where necessary and appropriate. The docket contains the individual peer reviewer reports, EPA's response to the peer reviewers' comments, and supporting documents for the peer reviews. For more information about the peer review process, see EPA's Peer Review Handbook at *http://www.epa.gov/peerreview/pdfs/peer_review_handbook_2006.pdf.*

The 2009 revised risk analysis included additional data and information, a new model to evaluate the behavior of solvents in a landfill, revised fate and transport modeling, and an improved approach from the 2003 risk screening analysis to compare the estimates of the solvent quantities disposed to the risk-based solvent loading levels.

The 2009 revised risk analysis estimated the amount of each F-listed solvent contained in solvent-contaminated wipes and laundry sludge disposed of in MSWLFs (*i.e.,* estimated landfill loading rates). We compared these amounts to the estimated quantities of spent solvents that may be disposed of in MSWLFs without presenting unacceptable risks to human health and the environment (risk-based landfill mass loadings). The 2009 revised risk analysis consists of three separate documents, all of which are in the docket for today's final rule:

- ''Landfill Loadings Calculations for Disposed Solvent-Contaminated Wipes and Laundry Sludge Managed in Municipal Landfills,'' October, 2008
- ''Risk-Based Mass Loading Limits for Solvents in Disposed Wipes and Laundry Sludges Managed in Municipal Landfills,'' October, 2009
- ''F001–F005 Solvent-Contaminated Wipes and Laundry Sludge: Comparison of Landfill Loading Calculations and Risk-Based Mass Loading Limits,'' August, 2009

We evaluated the use of the F001–F005 listed solvents on wipes through a comprehensive review of the available information (including site visits, data collected by EPA for RCRA and other regulatory programs, public comments, and other available information). We eliminated 10 of the 30 listed solvents from the analysis because EPA has found that they are not widely used on wipes.[12] Of the ten eliminated solvents, five are ozone-depleting or present other serious hazards and are therefore banned or restricted from use. The other five solvents eliminated from the analysis may have been used on wipes in the past; however, our research found that these solvents are currently not used or are used only in very limited quantities in conjunction with wipes.

For the remaining 20 solvents, we estimated the amount of solvent that could plausibly be on a wipe and in laundry sludge before disposal and then estimated the number of generators potentially disposing of solvent-contaminated wipes or laundry sludge into a MSWLF. Through our calculations, we derived estimated landfill loading rates (ELLRs) for each of the solvents on an annual basis (*i.e.,* kilograms of solvent disposed in each landfill per year). To account for uncertainty and variability in the input parameters, we used a Monte Carlo simulation to develop a single distribution of mass loading rates (in kilograms per year per landfill) for each solvent from the disposed solvent-contaminated wipes and laundry sludge. These landfill loading distributions represent the amount of ''wipes-related'' solvent in the respective waste streams (*i.e.,* wipes and sludge). For both the disposed solvent-contaminated wipes and laundry sludges, the output of the method is a probability distribution of ELLRs based on the best available data. The October 2009 NODA and the full Landfill Loadings Report describe the assumptions made, the methodologies used, and the results of the analysis.

To assess the potential risks from the estimated landfill loadings of hazardous spent solvents that could be disposed of in MSWLFs (unlined and lined), we developed a methodology to estimate the amount of these spent solvents that could be disposed and still be protective of human health and the environment at the point of exposure. This methodology uses a probabilistic risk analysis of solvent-contaminated wipes to produce a distribution of risk estimates, which we then used to calculate a protective mass loading rate for each individual solvent. These ''allowable amounts'' are risk-based mass loading limits (RB–MLL) expressed in kilograms of each spent solvent that can be added to a landfill in a given year, with a certain probability of the risk remaining at or below the risk-based criteria evaluated by EPA. These RB–MLLs were derived from modeling scenarios defined in terms of the solvent, landfill type (lined or unlined), exposure route (ingestion, inhalation, dermal absorption), contact media (groundwater, ambient air), and receptor (child or adult).

We identified RB–MLLs for each solvent such that the exposure at the 50th and 90th percentiles of the risk distribution would not exceed the identified target risk criteria if these materials were disposed of in a MSWLF. The Agency typically uses the 50th and 90th percentiles to characterize risk. The 90th percentile represents a ''high end'' estimate of individual risk, and the 50th percentile reflects the central tendency estimate of the risk distribution.[13] For this analysis, the target risk criteria were selected so that 90 percent of the hypothetical individuals living near a landfill would not be exposed to solvent releases resulting in an excess lifetime cancer risk above 1 chance in 100,000 (10^{-5}).[14] For noncancer health effects, we used a hazard quotient (HQ) of one as our risk criterion, such that HQ values below or equal to one were not of concern (the noncancer HQ is defined as the ratio of predicted intake levels to safe intake

[12] We eliminated Carbon tetrachloride, 1,1,1-Trichloroethane, Trichlorofluoromethane, Dichlorodifluoromethane, 1,1,2-Trichlorotrifluorethane, Carbon disulfide, Ethyl ether, Nitrobenzene, 2-Nirtopropane, and Pyridine. For a detailed discussion on these solvents, see the ''Landfill Loadings Calculations for Disposed Solvent-Contaminated Wipes and Laundry Sludge Managed in Municipal Landfills,'' Section 1.2.

[13] *Guidance for Risk Characterization,* U.S. Environmental Protection Agency, 1995.

[14] These risk criteria are consistent with those discussed in EPA's hazardous waste listing determination policy (December 22, 1994; 59 FR 66072). Also see 40 CFR 300.430(e)(2)(i)(A)(2), which establishes a cancer risk range of 10^{-4} to 10^{-6} in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) for responding to releases of hazardous substances under Superfund.

levels). The full RB–MLL report in the docket describes the assumptions made, the methodologies used, and the results of the analysis.

3. Results of the Revised Risk Analysis in the October 2009 NODA

To determine whether the landfill loading rates exceed the risk-based loading limits, EPA compared the ELLRs to the calculated RB–MLLs for each solvent. If the estimated landfill loading rates exceed the risk-based mass loading limits for a solvent, then this solvent could pose a potential risk for persons living near a landfill. To perform the comparison, EPA evaluated and considered a 90th percentile risk criterion for the risk-based mass loading limit to be protective of 90 percent of hypothetically exposed individuals across all of the landfill sites in the United States. Thus, we compared the 90th percentile estimate of the ELLRs to the 90th percentile of the RB–MLLs to determine whether the loading rates in landfills that can be attributed to solvent-contaminated wipes and laundry sludge exceed the RB–MLLs that correspond to selected health-based limits.

The comparisons of the ELLRs and RB–MLLs can be expressed as ratios, *i.e.*, the 90th percentile ELLRs (kilograms solvent per year) are divided by the 90th percentile RB–MLLs (kilograms solvent per year) for a specific solvent to yield a ratio. The ELLR is an estimate of the mass loading into the landfill and the RB–MLL is an estimate of the mass loading for each of the 20 solvents that would correspond to an exposure equivalent to the chosen risk criterion, or ''target'' risk. Therefore, if the ratio exceeds one, this indicates the degree to which the ELLR exceeds the evaluation criteria used to establish the RB–MLLs (*i.e.,* a cancer risk of 1×10^{-5} and an HQ of 1 for noncarcinogenic risk).

The comparison of the 90th percentile values of the ELLRs and the RB–MLLs indicates that 8 of the 20 spent solvents could pose potential risks above EPA's evaluation criteria for unlined landfills. The 90th percentile risks for benzene (using the high end cancer potency factor only),[15] 1,1,2-trichloroethane, methylene chloride, tetrachloroethylene, and trichloroethylene exceeded the 10^{-5} cancer risk criteria. The 90th percentile risks for chlorobenzene, toluene, and xylenes exceeded the criteria for non-cancer health effects (HQ = 1).

As expected, the predicted risks for the composite-lined landfill were always less than those for the unlined landfill analysis. Using the comparison of the 90th percentile results, the potential risks from all solvents examined in the composite-liner scenario, except for tetrachloroethylene, were well below the health-based criteria used in this 2009 risk analysis. The ratio of the 90th percentile ELLR divided by the 90th percentile RB–MLL for tetrachloroethylene was 1.1 using the higher end cancer risk value, and 0.9 using the lower end cancer risk value. For a more detailed explanation of how the ELLR and RB–MLL were compared, see the document ''F001–F005 Solvent-Contaminated Wipes and Laundry Sludge: Comparison of Landfill Loading Calculations and Risk Based Mass Loading Limits'' in the docket.

The results of the revised risk analysis presented in the October 2009 NODA were different than the results of the 2003 risk screening analysis presented in the November 2003 proposal. The number and identity of the solvents that showed a potential risk for disposal in an unlined landfill changed in the 2009 revised risk analysis. Also, we did not consider risks from disposal in lined landfills in the original 2003 risk screening analysis, whereas the 2009 revised risk analysis does consider risks from composite-lined non-hazardous waste landfills. In the NODA we sought comment on all aspects of the 2009 revised risk analysis, including the assumptions of the analysis, the data used, and the methodology employed.

4. Changes in the Final Risk Analysis

In responding to comments on the 2009 revised risk analysis (see the Major Comments on the Risk Analysis in section IX of this notice), we revised the Landfill Loadings document. We included updated information for various input parameters for reusable wipes that were gathered from surveys and submitted in comments by a trade association. Using the updated data lowered the solvent landfill loadings calculated for the sludges generated by laundries. (See the revised document, ''Landfill Loadings Calculations For Solvent-Contaminated Wipes, January 2012'' in the docket.) However, these changes had a limited impact on the overall risks presented by the combined disposal of disposable wipes and laundry sludges, because the sludges represented a relatively small fraction of the combined risk for the solvents. Nevertheless, the changes were sufficient to reduce the combined risk results for tetrachloroethylene in a composite-lined landfill, such that the ratio of ELLR to RB–MLL decreased from 1.1 to 1.0 (*i.e.,* the ratio would meet the target cancer risk criteria of 1.0×10^{-5}).

The Agency also issued new health assessments since the October 2009 NODA, which included updated reference values for two of the solvents, tetrachloroethylene and trichloroethylene. EPA posted these human health assessments, which are scientific reports that provide information on chemical hazards as well as quantitative dose-response information, on EPA's Integrated Risk Information System (IRIS).[16] We recalculated the RB–MLLs for tetrachloroethylene using the revised reference values. As a result, the combined risks for this chemical in a composite-lined unit dropped significantly, such that the risks were well below the target risk criteria (with or without the modifications to the sludge data discussed in the previous paragraph, the final ratio of the ELLR to the RB–MLL is less than 0.10). Thus, the results for tetrachloroethylene, which now include the revised landfill loadings and reflect the updated reference value, indicate that including this solvent in the conditional exclusion would not present a significant risk if the solvent-contaminated wipes and sludges are disposed in a composite-lined landfill.

On the other hand, using the updated reference values for trichloroethylene in our 2012 final risk analysis resulted in an *increase* in projected risks, such that the estimated landfill solvent loadings exceeded the risk-based mass loading limit with the ratio of the ELLR to the RB–MLL calculated at 1.4. These revisions to the risk analysis are summarized in addendums to the 2009 risk analysis document (''Impact of Revised Health Benchmarks on Solvent Wipes Risk-Based Mass Loading Limits (RB–MLLs),'' April 2012) and the revised document comparing ELLRs to RB–MLLs (''F001–F005 Solvent-Contaminated Wipes and Laundry Sludge: Comparison of Landfill Loading Calculations and Risk-Based Mass Loading Limits,'' revised April 2012).

Therefore, based on the 2012 final risk analysis using the updated reference values, wipes contaminated with trichloroethylene (*i.e.,* wipes contaminated with trichloroethylene

[15] High and low cancer potency factors were used to calculate risks for benzene and tetrachloroethylene, because these were available. Therefore, two cancer risks were calculated for these two solvents.

[16] The final health assessment for trichloroethylene was posted on IRIS on September 28, 2011 (*http://www.epa.gov/iris/subst/0199.htm*). The assessment for tetrachloroethylene was posted on February 10, 2012 (*http://www.epa.gov/IRIS/subst/0106.htm*).

solvent itself or in F-listed solvent blends) are ineligible for the conditional exclusion for disposable wipes.[17] That is, the updated results of our 2012 final risk analysis indicate that trichloroethylene may present a substantial hazard to human health, even if disposed in a composite-lined unit. Updated reference values for trichloroethylene and for tetrachloroethylene are similarly reflected in the final risk results for disposal in an unlined landfill; wipes containing these solvents nonetheless continue to present risks above the risk criteria in the unlined landfill scenario.

Use of the updated reference values ensures that the final rule incorporates the most recent scientific data available and will prevent potential risks from disposal of wipes contaminated with trichloroethylene. The updating of the reference values does not impact our overall assessment methodology, which was externally peer reviewed and published for public comment in a 2009 NODA. The IRIS assessment development process includes an internal Agency review, two opportunities for science consultation and discussion with other federal agencies, a public hearing, public review and comment, and an independent external peer review, all of which is part of the official public record. In addition to this rigorous review process, trichloroethylene was reviewed by the EPA's Science Advisory Board and tetrachloroethylene underwent review by the National Academies of Science. Because both the risk analysis methodology and the IRIS assessments have been peer and publicly reviewed separately, it is appropriate to use the updated IRIS reference values in evaluating which solvents should be included in the conditional exclusion for solvent-contaminated wipes. Furthermore, in the background document presenting the revised risk analysis for the October 2009 NODA, the Agency noted that the health assessments for tetrachloroethylene and trichloroethylene were undergoing review as part of its process for updating the health assessments for the IRIS program.[18] Moreover, we note that trichloroethylene's eligibility status in today's rule has not changed from the 2003 proposed rule, in which EPA proposed to make wipes contaminated with trichloroethylene (in addition to ten other solvents) ineligible for the exclusion from the definition of hazardous waste for disposable wipes. Additionally, EPA notes that its 2009 revised risk analysis demonstrated, for the composite-liner scenario, that tricholorethylene at the 90th percentile would fall below target risk thresholds for the 10^{-5} cancer level (ratio = 0.1), but would exceed target risk thresholds for the 10^{-6} cancer level (ratio = 1.5).

IV. How do the provisions in the final rule compare to those proposed on November 20, 2003?

EPA is finalizing the conditional exclusions largely as proposed in November 2003, with some revisions. The following is a brief overview of the revisions to the proposal, with references to additional preamble discussions for more detail.

For the conditional exclusion for reusable wipes, we have determined that the Paint Filter Liquids Test (Method 9095B) is most appropriate to determine whether solvent-contaminated wipes contain no free liquids. We have also made some revisions to the container standard and have added a labeling requirement. Furthermore, we have specified that the solvent-contaminated wipes may be accumulated by the generator for up to 180 days prior to being sent for cleaning and have added recordkeeping requirements to assist in monitoring compliance with the conditional exclusion. Lastly, we have also specified that reusable wipes are only allowed to go to an industrial laundry or dry cleaner whose discharge, if any, is regulated under sections 301 and 402 or section 307 of the CWA, provided the conditions of the exclusion are being met. For further discussion on the conditional exclusion for reusable wipes, see section VI of this preamble.

For the conditional exclusion for disposable wipes, we have determined that the Paint Filter Liquids Test (Method 9095B) is most appropriate to determine whether solvent-contaminated wipes contain no free liquids. Additionally, we have eliminated the condition that solvent-contaminated wipes going to landfills must contain less than 5 grams of solvent: Instead, these wipes must contain no free liquids. We have also made some revisions to the container standard. Furthermore, we have specified that the solvent-contaminated wipes may be accumulated by the generator for up to 180 days prior to being sent for disposal and have added recordkeeping requirements to assist with monitoring compliance with the conditional exclusion. We have also specified that solvent-contaminated wipes being land disposed must be managed by a landfill that is regulated under the MSWLF regulations under 40 CFR part 258, including the design criteria in section 258.40, or is operating under the hazardous waste regulations in 40 CFR parts 264 or 265. Solvent-contaminated wipes being combusted are allowed to go to a municipal waste combustor or other combustion facility that is regulated under section 129 of the CAA or is operating under the hazardous waste standards in 40 CFR parts 264, 265, or 266 subpart H, provided the conditions of the exclusion are being met. Lastly, we have expanded the scope of solvent-contaminated wipes eligible for this exclusion based on the revised risk analysis presented in the October 2009 NODA: Only one solvent, trichloroethylene, remains ineligible for this conditional exclusion based on the results of EPA's 2012 final risk analysis for this rulemaking. For further discussion on the conditional exclusion for disposable wipes, see section VII of this preamble.

Additionally, we have chosen not to finalize the provision allowing intra-company transfer of reusable and disposable wipes for the purpose of removing sufficient solvent to meet the ''no free liquids'' condition. Furthermore, we have modified certain definitions in today's rule, such as the definition for ''wipe,'' ''solvent-contaminated wipe,'' and ''no free liquids'' and have eliminated some definitions (''intra-company transfer of industrial wipes,'' ''industrial wipes handling facility,'' ''reusable industrial wipe,'' ''disposable industrial wipe,'' and ''solvent extraction'') that we determined are not needed for the final rule. For further discussion, see section VIII of this preamble.

V. When will the final rule become effective?

This rule is effective on January 31, 2014. Section 3010(b) of RCRA allows EPA to promulgate a rule with a period for the effective date shorter than six months where the Administrator finds that the regulated community does not need additional time to come into compliance with the rule. Although most provisions in today's rule do not impose additional requirements on the regulated community and, instead, provide flexibility in the regulations with which the regulated community is required to comply, some provisions in today's conditional exclusions may

[17] Although wipes contaminated with trichloroethylene are not eligible for the exclusion for disposable wipes, these wipes are eligible for the exclusion for reusable wipes because, under the reusable wipe exclusion, these wipes are not solid wastes subject to hazardous waste regulation, including the TC regulations.

[18] See ''Risk-Based Mass Loading Limits for Solvents in Disposed Wipes and Laundry Sludges Managed in Municipal Landfills,'' October 2009, pages 3–60 and 4–30.

differ from existing state regulations and policies (such as specific recordkeeping requirements). Taking this into account, we find it is appropriate for the rule to come into effect six months after publication in the **Federal Register**.

VI. Conditional Exclusion From the Definition of Solid Waste for Solvent-Contaminated Wipes That Are Cleaned and Reused

A. What is the purpose of this conditional exclusion?

EPA is finalizing 40 CFR 261.4(a)(26) to exclude solvent-contaminated reusable wipes from the definition of solid waste in order to establish consistent federal regulations regarding the management of reusable wipes. As stated in section III, in the 1990s, EPA developed a policy that deferred determinations and interpretations regarding regulation of solvent-contaminated wipes to authorized states or the EPA regions. This policy has led to the application of different regulatory schemes for reusable wipes: Some states exclude reusable wipes from the definition of solid waste, while others exclude reusable wipes from the definition of hazardous waste, and five states regulate reusable wipes as hazardous waste. Additionally, the specific management standards vary from state to state. Today's rule aims to provide national consistency in regards to regulations for reusable wipes.

B. Basis for Conditional Exclusion From the Definition of Solid Waste

Under RCRA, for a material to be regulated as a hazardous waste, it must first be a solid waste. There are three key considerations specific to solvent-contaminated reusable wipes that demonstrate they are not solid wastes.

The first consideration is the physical and chemical characteristics of the solvent-contaminated wipe. Under today's conditional exclusion, reusable wipes must have no free liquids at the point of transport by the generator for cleaning. This ''no free liquids'' standard minimizes the potential for releases of hazardous constituents into the environment (*e.g.,* through spills). Furthermore, the wipes must be accumulated, stored, and transported in non-leaking, closed containers, which reduces the possibility the solvents will be released to the environment.

The second consideration is that the solvent-contaminated wipes have recognized value. Laundries own the wipes and routinely count the soiled wipes received from their customers. If a wipe is missing, the customer is charged a fee. Therefore, generators have an economic incentive to manage dirty wipes appropriately and ensure they are returned to the laundry or dry cleaner. The contaminated wipes are thus managed as valuable commodities throughout their lifecycles.

The third consideration includes the characteristics of the recycling market for reusable wipes. Reusable wipes are typically managed under service contracts in which a customer contracts with a laundry or dry cleaner for the service of clean wipes. This type of business model is noteworthy because it differs from traditional hazardous waste recycling markets in which a reclaimer is typically paid by a generator to receive and manage the hazardous secondary materials and is not typically paid to send the recycled product back to the generator. In some cases, hazardous waste reclaimers gain their primary revenue from the fees charged to generators to receive and manage the hazardous waste and not from the sale of the recycled product. This creates an incentive for the hazardous waste reclaimer to overaccumulate materials, which increases the possibility of mismanagement of the hazardous wastes. However, this incentive does not exist for laundries and dry cleaners managing solvent-contaminated wipes because the laundry or dry cleaner derives its primary revenue from the service of clean wipes back to the customer. There is thus no economic incentive for a laundry or dry cleaner to overaccumulate solvent-contaminated wipes.

C. Scope and Applicability

The conditional exclusion for solvent-contaminated wipes that are cleaned and reused is applicable to wipes that, after use or after cleaning up after a spill, are contaminated with solvents and that would otherwise be regulated as hazardous waste. Specifically, this includes wipes that (1) contain one or more of the F001 through F005 solvents listed in 40 CFR 261.31 or the corresponding P- or U-listed solvents found in 40 CFR 261.33; (2) exhibit a hazardous characteristic found in 40 CFR part 261 subpart C when that characteristic results from a solvent listed in 40 CFR part 261; and/or (3) exhibit only the hazardous waste characteristic of ignitability found in 40 CFR 261.21 due to the presence of one or more solvents that are not listed in 40 CFR part 261. Solvent-contaminated wipes that contain listed hazardous waste other than solvents, or exhibit the characteristic of toxicity, corrosivity, or reactivity due to contaminants other than solvents (such as metals), are not eligible for the exclusion at 40 CFR 261.4(a)(26).

The conditional exclusion is only applicable to the contaminated wipes themselves. At the point of on-site laundering or dry cleaning or at the point of off-site transport from the generator to a laundry or dry cleaner, the solvent-contaminated wipes must contain no free liquids as defined in section 40 CFR 260.10. Free liquid spent solvent itself remains solid waste and thus, is subject to the applicable hazardous waste regulations under RCRA Subtitle C upon removal from the solvent-contaminated wipe and/or from the container holding the wipes.

D. Conditions of Exclusion

Under today's rule, generators have primary responsibility for assuring that their solvent-contaminated reusable wipes meet the conditions of the exclusion. Additionally, handling facilities that receive and process reusable wipes, such as industrial laundries or dry cleaners, also need to meet certain conditions for the wipes to remain excluded.[19]

1. Container Standard

Under today's conditional exclusion, solvent-contaminated reusable wipes must be accumulated, stored, and transported in non-leaking, closed containers that are labeled ''Excluded Solvent-Contaminated Wipes.'' Additionally, the container must be able to contain free liquids should free liquids occur, for example, from percolation and compression of the wipes. Today's container standard applies to accumulation and storage at the generating facility, transportation either on-site or off-site, and, finally, storage and management at the handling facility.

Managing reusable wipes in non-leaking, closed containers ensures that the solvents are unlikely to be released to the environment. Closed containers serve to minimize emissions, prevent spills, and reduce the risk of fires, for example, by securing the solvent-contaminated wipes from potentially incompatible wastes or ignition sources.

During accumulation of solvent-contaminated wipes, a closed container does not necessarily mean a sealed container. Instead, when solvent-contaminated wipes are being accumulated, the container is

[19] ''Handling facilities'' is a term used throughout today's preamble to refer to facilities that receive and either clean or dispose of solvent-contaminated wipes under today's conditional exclusions. These include laundries, dry cleaners, landfills, and combustors as well as RCRA interim status or permitted facilities.

considered closed when there is complete contact between the fitted lid and the rim.[20] However, when the container is full, or when the solvent-contaminated wipes are no longer being accumulated, or when the container is being transported, the container must be sealed with all lids properly and securely affixed to the container and all openings tightly bound or closed. The objective of this is to prevent the release of any volatile organic emissions and to prevent a spill if the container is tipped over.

The closed container condition in today's rule is a performance-based standard and, thus, facilities have flexibility in determining how best to meet this standard based on their specific processes. For example, solvent-contaminated wipes can be accumulated in an open-head drum or open top container (*e.g.,* where the entire lid is removable and typically secured with a ring and bolts or a snap ring) and be considered closed when the cover makes complete contact between the fitted lid and the rim, even though the rings are not clamped or bolted. A tight seal minimizes emissions of volatile organic compounds (however, generators should be aware that the seals on containers can erode because of time and use, and should be checked periodically for wear and replaced as necessary). After accumulation and during transportation, this same container must be sealed in order to meet the closed container standard and thus, the rings must be clamped or bolted to the container. Containers with covers opened by a foot pedal (*e.g.,* flip-top or spring loaded lid) or with a self-closing swinging door could also be appropriate. Bags can be used, provided they meet today's closed container standard. EPA considers bags closed when the neck of the bag is tightly bound and sealed to the extent necessary to keep the solvent-contaminated wipes and associated air emissions inside the container. The bag must be able to contain liquids and must be non-leaking. (Of course, a bag leaving a trail of liquid on the ground does not meet today's container standard.) These examples of closed containers are consistent with EPA's policy on closed containers (see ''Guidance on 40 CFR 264.173(a) and 265.173(a): Closed Containers'' Robert Dellinger, December 3, 2009, and subsequent ''Closed Container Guidance: Questions and Answers'' Betsy Devlin, November 3, 2011 (RCRA Online 14826)).

Containers of reusable wipes also must be properly labeled as ''Excluded Solvent-Contaminated Wipes'' to ensure that facility employees, emergency response personnel, motor carrier inspectors, downstream transporters and handlers, and state and EPA enforcement are aware of the contents of these containers. This ensures that containers can be properly stored, handled, and inspected. Requiring a specific label establishes a national standard that can be easily recognized among different facilities, industries, and state programs.

2. Accumulation Time Limit

Generators may accumulate reusable wipes for up to 180 days prior to sending the wipes for cleaning. This 180-day clock begins at the start date of accumulation for each container (*i.e.,* the date the first solvent-contaminated wipe is placed in the container).[21]

During accumulation, wipes may contain free liquids or free liquids may result from percolation or compression of the solvent-contaminated wipes in a container. These free liquids, upon removal from the solvent-contaminated wipes and/or from the container holding the wipes, must be managed according to the applicable hazardous waste regulations found in 40 CFR parts 260 through 273. Today's accumulation standard ensures that free liquids are removed from the solvent-contaminated wipes and the container within the 180-day time frame and thus, cannot be stored indefinitely. Generators taking advantage of today's conditional exclusion likely already have contractual arrangements with laundries or dry cleaners that schedule periodic (*e.g.,* weekly) pickup of solvent-contaminated wipes and, thus, this accumulation time limit should not present an undue burden to generators.

Under today's rule, reusable wipes managed according to 40 CFR 261.4(a)(26) are not solid wastes and, thus, not hazardous wastes. Therefore, solvent-contaminated wipes managed under today's conditional exclusion do not count towards a generator's hazardous waste regulatory status. However, free liquid spent solvent removed from the solvent-contaminated wipes or from the container holding the wipes must be managed according to the applicable hazardous waste regulations found in 40 CFR parts 260 through 273, which would include counting towards determining monthly generator status.

3. No Free Liquids

Under today's conditional exclusion for reusable wipes, generators must meet the ''no free liquids'' condition as defined in 40 CFR 260.10 at the point of transporting the solvent-contaminated wipes for cleaning, either off-site or on-site. Additionally, the container holding the solvent-contaminated wipes must not contain free liquids at the point of transporting the wipes for cleaning. Free liquids removed from the solvent-contaminated wipes must be collected and managed according to the applicable hazardous waste regulations found in 40 CFR parts 260 through 273 and may count towards determining monthly generator status.

EPA explained in the November 2003 proposal that the Agency intends for compliance with the ''no free liquids'' condition to be determined by a practical test and requested comment on the proposed approach for determining if the ''no free liquids'' condition is met and whether there are other approaches EPA should have considered in the proposal (68 FR 65605). Comments received on the proposal urged EPA to define a clear and objective standard, for example, by defining which technologies would meet the ''no free liquids'' condition. However, defining a list of specific technologies is not practical, particularly if such specific technologies are not necessary to meet the condition and also because technology changes over time. Rather, EPA understands that the spirit of these comments reflects the need for a standard that clearly demonstrates whether a solvent-contaminated wipe does or does not contain free liquids.

EPA has established an official compendium of analytical and sampling methods that have been evaluated and approved for use in complying with the RCRA regulations. This compendium is entitled ''Test Methods for Evaluating Solid Waste, Physical/Chemical Methods'' (EPA Publication SW–846).[22] As explained in the November 2003 proposal, many state policies regarding solvent-contaminated wipes already use various test methods from this

[20] This is consistent with EPA's policy on closed containers (see ''Guidance on 40 CFR 264.173(a) and 265.173(a): Closed Containers'' Robert Dellinger, December 3, 2009).

[21] Generators may transfer solvent-contaminated wipes between containers to facilitate accumulation, storage, off-site transportation, or removal of free liquids. For example, a generator may wish to consolidate several partially filled containers of solvent-contaminated wipes. However, the 180-day ''clock'' for accumulation does not restart if the solvent-contaminated wipes are merely transferred to another container. This is consistent with EPA's policy on generator accumulation under the hazardous waste regulations (see ''Frequently Asked Questions about Satellite Accumulation Areas'' Robert Springer, March 17, 2004).

[22] *http://www.epa.gov/epawaste/hazard/testmethods/sw846/index.htm.*

compendium (68 FR 65599). The majority of these states require the use of the Paint Filter Liquids Test (SW–846 Method 9095B), although other specified methods include the Liquids Release Test (SW–846 Method 9096), and the Toxicity Characteristic Leaching Procedure (TCLP) (SW–846 Method 1311).[23]

Thus, for the purpose of today's final rule, EPA finds that use of one of its own established test methods is appropriate to clearly and objectively determine that there are no free liquids. The Paint Filter Liquids Test (SW–846, Method 9095B) was specifically chosen because it is currently being used by the majority of states to determine whether solvent-contaminated wipes contain free liquids and is also the test used to implement the restrictions on disposal of free liquids in the MSWLF regulations (40 CFR 258.28). The test is also simple and inexpensive to perform and typically produces clear results. It includes placing a predetermined amount of material in a paint filter and if any portion of the material passes through and drops from the filter within five minutes, the material is deemed to contain free liquids.

This does not mean that generators must conduct this test for every solvent-contaminated wipe. Rather, generators must ensure that if the Paint Filter Liquids Test was performed, the solvent-contaminated wipe would pass. In order to meet the performance standard, generators may use any of a range of methods to remove solvent from the wipe such as centrifuging, mechanical-wringing, screen-bottom drums, microwave technology, and vacuum extractors. To ensure that the solvent-contaminated wipes meet the standard, generators may conduct sampling or use knowledge regarding how much solvent is present in each wipe. Solvent-contaminated wipes that have been subject to advanced solvent extraction processes, such as centrifuges, or any other similarly effective method to remove solvent from the wipes, are likely to meet this standard. Additionally, generators must document how they are meeting the ''no free liquids'' condition (see section VI.D.4 below for additional information).

As mentioned above, some states presently rely on other test methods (*e.g.*, Liquids Release Test or Toxicity Characteristic Leaching Procedure) to determine whether solvent-contaminated wipes contain no free liquids under their state policies. Where an authorized state has specified a standard or test method for determining that solvent-contaminated wipes contain no free liquids, generators must meet that standard in lieu of the Paint Filter Liquids Test for purposes of meeting the ''no free liquids'' condition. Of course, the authorized state standard must be no less stringent than today's definition of ''no free liquids.''

4. Recordkeeping

Generators must maintain at their site documentation that they are managing wipes excluded under 40 CFR 261.4(a)(26). This documentation must include (1) the name and address of the laundry or dry cleaner that is receiving the reusable wipes; (2) documentation that the 180-day accumulation time limit is being met; and (3) a description of the process the generator is using to meet the ''no free liquids'' condition.

The purpose of documenting the name and address of the laundry or dry cleaner is to allow the state and EPA to ensure compliance with the conditions of the exclusion. EPA is not requiring a specific template or format for this information and anticipates that routine business records, such as contracts or invoices, contain the appropriate information for meeting this requirement. This documentation only needs to be updated in the event of a change to the name or address of the laundry or dry cleaner.

Documenting the 180-day accumulation time limit enables regulatory authorities to ensure the solvent-contaminated wipes are being sent for cleaning in compliance with the exclusion and are not being stored indefinitely at the generating facility. This documentation can take one of many forms, such as a service contract or invoice from the laundry or dry cleaner which describes the frequency of scheduled delivery and pick-up of wipes; a log that lists the start date of accumulation for each container of solvent-contaminated wipes; or labels on each container which include the start date of accumulation (*i.e.*, the date the first solvent-contaminated wipe is placed in the container).

The purpose of documenting the process the generator is using to meet the ''no free liquids'' condition is to demonstrate that the generator is implementing a process that ensures that it will not illegally transport free liquid hazardous waste off-site. This documentation should include a description of any technologies, methods, sampling, or knowledge that a generator is using to ensure that solvent-contaminated wipes sent to a laundry or dry cleaner for cleaning contain no free liquids. State and EPA regulators may use this documentation to assess whether the generator is adequately meeting the ''no free liquids'' condition. This documentation only needs to be updated in the event that the generator changes its process for meeting the ''no free liquids'' condition.

5. Handling Facility Requirements

Handling facilities must accumulate, store, and manage reusable wipes in non-leaking, closed containers that are labeled ''Excluded Solvent-Contaminated Wipes'' when the wipes are not being processed or cleaned. Additionally, the container must also be able to contain free liquids should free liquids occur, for example, from percolation and compression of the wipes. See section VI.D.1 for more information regarding this closed container standard.

In the November 2003 proposal, EPA explained that solvent discharges from laundries or dry cleaners to POTWs are allowed under the wastewater exclusion found at 40 CFR 261.4(a)(2) and that local POTWs have the authority to set limits applicable to individual indirect dischargers to prevent releases and to prevent interference with operations at the POTW (68 FR 65605). Additionally, EPA noted that most states require that the laundry discharge to a POTW or have a permit for discharge under the CWA (68 FR 65592).

Some commenters were concerned that contaminated solvents removed from the solvent-contaminated wipes in laundering and discharged into waterways would adversely affect human health and the environment. Commenters believed that laundries and dry cleaners should be required to demonstrate that they are appropriately managing the solvent removed from the solvent-contaminated wipes during cleaning. However, as explained in the proposed rule, the regulations under the CWA effectively control solvent discharges either through the National Pollutant Discharge Elimination System (NPDES) or, for indirect discharges to POTWs, under the National Pretreatment Program. To eliminate confusion regarding how the CWA applies to solvent discharges from laundries and dry cleaners, we are clarifying in the regulatory language that we are allowing reusable wipes that meet the conditions of today's rule to be sent to laundries and dry cleaners whose discharges, if any, are regulated under sections 301 (effluent discharge restrictions) and 402 (permitting requirements) or section 307 (indirect discharge to a POTW of the CWA).

[23] Technical Background Document, August 2003. Docket No. EPA–HQ–RCRA–2003–0004–0003.

Though rare, free liquids may inadvertently make their way to the handling facility as a result of compression, gravity, or percolation effects on the wipes during transport or by improper management of the solvent-contaminated wipes by the generator prior to transport. In this case, free liquids must be removed from the solvent-contaminated wipes or containers and must be managed according to the applicable hazardous waste regulations found in 40 CFR parts 260 through 273 and may count towards the handling facility's generator status. EPA does not intend for this provision to require any additional effort beyond that of a handling facility's normal operations and monitoring practices. However, should free liquids be discovered at any point, these free liquids must be managed according to applicable hazardous waste regulations. The handling facility can ship the free liquid off-site as hazardous waste or can manage them as hazardous waste in an on-site recovery system.

Under this provision, removal of free liquid spent solvent by the handling facility would not automatically affect the regulatory status of the solvent-contaminated wipes. Solvent-contaminated wipes would still remain subject to the conditional exclusion provided the generator complied with the conditions of the exclusion.

Any residuals generated from cleaning solvent-contaminated wipes (*e.g.,* wastewater treatment sludge) that exhibit a hazardous characteristic according to subpart C of 40 CFR part 261 must be managed according to the applicable hazardous waste requirements of 40 CFR parts 260 through 273. This is consistent with the way the existing hazardous waste regulations apply to any waste stream.

VII. Conditional Exclusion From the Definition of Hazardous Waste for Solvent-Contaminated Wipes That Are Disposed

A. What is the purpose of this conditional exclusion?

EPA is finalizing 40 CFR 261.4(b)(18) to exclude solvent-contaminated disposable wipes from the definition of hazardous waste in order to provide a regulatory framework that is more appropriate to the level of risk posed by disposable wipes while reducing regulatory burden for the industry, many of which are small businesses.

B. Basis for Conditional Exclusion From Hazardous Waste

Under RCRA, for a solid waste to be a hazardous waste, it must either be listed as a hazardous waste under 40 CFR part 261 subpart D or exhibit a hazardous characteristic under 40 CFR part 261 subpart C. Secondary materials can also become hazardous wastes if they contain listed hazardous wastes. Thus, wipes contaminated with solvents that are listed hazardous wastes when discarded become listed hazardous wastes themselves. When wipes are contaminated with solvents that are not listed hazardous wastes when discarded, the contaminated wipe is regulated as a hazardous waste if it exhibits a hazardous waste characteristic.

As discussed above, EPA has received multiple petitions from industry that argued that regulating solvent-contaminated disposable wipes as hazardous waste is burdensome and unnecessary to protect human health and the environment. These stakeholders argued that the wipes contain insignificant concentrations of solvents and, thus, do not pose an environmental risk when disposed.

In response to stakeholders' concerns and in support of this rulemaking, EPA evaluated the potential risks from wipes contaminated with 20 listed solvents when those solvent-contaminated wipes are disposed in either a lined or unlined landfill. The results of the 2012 final risk analysis demonstrate that wipes contaminated with 19 of the 20 listed solvents evaluated do not exceed target risk criteria when disposed in a composite-lined landfill. (For more information on the 2012 final risk analysis, including the October 2009 NODA, see section III.D.)

The results of the 2012 final risk analysis support stakeholders' arguments that full hazardous waste regulation for most solvent-contaminated wipes is not necessary to ensure protection of human health and the environment. Requiring full hazardous waste regulation for disposable wipes results in needless regulatory burden on thousands of entities, many of which are small businesses. EPA is thus finalizing today a conditional exclusion for disposable wipes which applies a more appropriate regulatory framework to these materials based on the results of our 2012 final risk analysis.

C. Scope and Applicability

The conditional exclusion for disposable wipes is applicable to most wipes that, after use or after cleaning up a spill, are contaminated with solvents and that would otherwise be regulated as hazardous waste. Specifically this includes wipes that (1) contain one or more of the F001 through F005 solvents listed in 40 CFR 261.31 or the corresponding P- or U-listed solvents found in 40 CFR 261.33, with the exception of trichloroethylene; [24] (2) exhibit a hazardous characteristic found in 40 CFR part 261 subpart C when that characteristic results from a solvent listed in 40 CFR part 261; and/or (3) exhibit only the hazardous waste characteristic of ignitability found in 40 CFR 261.21 due to the presence of one or more solvents that are not listed in 40 CFR part 261. Solvent-contaminated wipes that contain listed hazardous waste other than solvents, or exhibit the characteristic of toxicity, corrosivity, or reactivity due to contaminants other than solvents (such as metals), are not eligible for the exclusion at 40 CFR 261.4(b)(18).

The conditional exclusion is only applicable to the contaminated wipes themselves. At the point of transport from the generator to a landfill or combustor, the solvent-contaminated wipes must contain no free liquids as defined in section 260.10. Free liquid spent solvent itself remains solid waste and thus, is subject to the applicable hazardous waste regulations under RCRA Subtitle C upon removal from the solvent-contaminated wipe and/or from the container holding the wipes.

D. Conditions of Exclusion

Under today's rule, generators have primary responsibility for assuring that their solvent-contaminated wipes meet the conditions of the exclusion. Additionally, handling facilities which receive and process disposable wipes, such as municipal waste combustors, also need to meet certain conditions for the solvent-contaminated wipes to remain excluded.

1. Container Standard

Under today's conditional exclusion, solvent-contaminated disposable wipes must be accumulated, stored, and transported in non-leaking, closed containers that are labeled ''Excluded Solvent-Contaminated Wipes.'' Additionally, the container must be able to contain free liquids should free liquids occur, for example, from percolation and compression of the wipes. Today's container standard

[24] Based on EPA's final risk analysis, wipes that are hazardous waste due to the presence of trichloroethylene are not eligible for the exclusion from hazardous waste for disposable wipes and thus are subject to all applicable hazardous waste regulations in 40 CFR parts 260 through 273. However, wipes contaminated with trichloroethylene are eligible for the exclusion for reusable wipes because, under the reusable wipe exclusion, these wipes are not solid wastes subject to hazardous waste regulation, including the TC regulations.

applies to accumulation and storage at the generating facility, transportation either on-site or off-site, and, finally, storage and management at the handling facility.

Managing disposable wipes in non-leaking, closed containers ensures that the solvents are unlikely to be released to the environment. Closed containers serve to minimize emissions, prevent spills, and reduce the risk of fires, for example, by securing the solvent-contaminated wipes from potentially incompatible wastes or ignition sources. Today's container standard for disposable wipes is the same as the container standard we are finalizing for the conditional exclusion for reusable wipes. See section VI.D.1 for more information regarding this standard.

2. Accumulation Time Limit

Generators may accumulate disposable wipes for up to 180 days prior to sending the wipes for disposal. This 180-day clock begins at the start date of accumulation for each container (*i.e.,* the date the first solvent-contaminated wipe is placed in the container).[25] This is the same condition finalized under the conditional exclusion for reusable wipes; see section VI.D.2 for more information.

During accumulation, wipes may contain free liquids or free liquids may result from percolation or compression of the solvent-contaminated wipes in a container. These free liquids, upon removal from the solvent-contaminated wipes or from the container holding the wipes, must be managed according to the applicable hazardous waste regulations found in 40 CFR parts 260 through 273. Today's accumulation standard ensures that free liquids are removed from the solvent-contaminated wipes and the container within the 180-day time frame and thus, cannot be stored indefinitely in lieu of being disposed. Because disposable wipes meeting the conditions of today's rule can be discarded with other solid waste trash and since the vast majority of generator facilities, if not all, regularly dispose of other solid waste trash, this accumulation time limit should not present undue burden for facilities.

Under today's rule, disposable wipes managed according to the conditions established in 40 CFR 261.4(b)(18) are not hazardous wastes. Therefore, solvent-contaminated wipes managed under today's conditional exclusion do not count towards a generator's hazardous waste regulatory status. However, free liquid spent solvent removed from the solvent-contaminated wipes or from the container holding the wipes must be managed according to the applicable hazardous waste regulations found in 40 CFR parts 260 through 273, which would include counting towards determining monthly generator status.

3. No Free Liquids

Under today's conditional exclusion for disposable wipes, generators must meet the ''no free liquids'' condition as defined in 40 CFR 260.10 at the point of transporting the solvent-contaminated wipes to be disposed at a combustor or landfill. Additionally, the container holding the solvent-contaminated wipes must not contain free liquids at the point of transporting the wipes for disposal. Free liquids removed from the solvent-contaminated wipes or the container holding the wipes must be collected and managed according to the applicable hazardous waste regulations found in 40 CFR parts 260 through 273 and may count towards determining monthly generator status. This is the same standard finalized under the conditional exclusion for reusable wipes (see section VI.D.3 for more information).

As described above, EPA has determined that the Paint Filter Liquids Test (SW–846, Method 9095B) is most appropriate for determining whether solvent-contaminated wipes contain free liquids. This does not mean that generators must conduct this test for every solvent-contaminated wipe. Rather, generators must ensure that if the Paint Filter Liquids Test was performed, the solvent-contaminated wipe would pass. In order to meet the performance standard, generators may use any of a range of methods to remove solvent from the wipe such as centrifuging, mechanical-wringing, screen-bottom drums, microwave technology, and vacuum extractors. To ensure that the wipes meet the standard, generators may conduct sampling or use knowledge regarding how much solvent is contained in each wipe. Solvent-contaminated wipes that have been subject to advanced solvent extraction processes, such as centrifuges, or any other similarly effective method to remove solvent from the wipes, are likely to meet this standard. Additionally, generators must document how they are meeting the ''no free liquids'' condition (see section VII.D.4 below for additional information).

Authorized states may establish other methods for defining ''no free liquids.'' Where an authorized state has specified a standard or test method for determining that solvent-contaminated wipes contain no free liquids, generators must meet that standard in lieu of the Paint Filter Liquids Test for purposes of meeting the ''no free liquids'' condition (see section VI.D.3 for more information). Of course, the authorized state standard must be no less stringent than today's definition of ''no free liquids.''

4. Recordkeeping

Generators must maintain at their site documentation that they are managing solvent-contaminated wipes excluded under 40 CFR 261.4(b)(18). This documentation must include (1) the name and address of the landfill or combustor that is receiving the disposable wipes; (2) documentation that the 180-day accumulation time limit is being met; and (3) a description of the process the generator is using to meet the ''no free liquids'' condition.

The purpose of documenting the name and address of the combustor or landfill is to allow the state and EPA to ensure compliance with the conditions of the exclusion. EPA is not requiring a specific template or format for this information and anticipates that routine business records, such as contracts or invoices, contain the appropriate information for meeting this requirement. This documentation only needs to be updated in the event of a change in the name or address of the combustor or landfill.

Documenting the 180-day accumulation time limit enables regulatory authorities to ensure the solvent-contaminated wipes are being sent for disposal in compliance with the conditional exclusion and are not being stored indefinitely at the generating facility. This documentation can take one of many forms, such as a service contract or invoice from the combustor, landfill, or other transporter which describes the frequency of scheduled pick-up of solvent-contaminated wipes; a log that lists the start date of accumulation for each container of solvent-contaminated wipes; or labels on each container which include the start date of accumulation (*i.e.,* the date the first solvent-contaminated wipe is placed in the container).

The purpose of documenting the process the generator is using to meet the ''no free liquids'' condition is to demonstrate that the generator is

[25] Generators may transfer solvent-contaminated wipes between containers to facilitate accumulation, storage, transportation, or removal of free liquids. For example, a generator may wish to consolidate several partially filled containers of solvent-contaminated wipes. However, the 180-day ''clock'' for accumulation does not restart if the solvent-contaminated wipes are merely transferred to another container. This is consistent with EPA's policy on generator accumulation under the hazardous waste regulations (see ''Frequently Asked Questions about Satellite Accumulation Areas'' Robert Springer, March 17, 2004).

implementing a process that ensures that it will not illegally transport hazardous waste (*i.e.,* free liquid spent solvent) off-site. This documentation should include a description of any technologies, methods, sampling, or knowledge that a generator is using to ensure that solvent-contaminated wipes sent to a combustor or landfill contain no free liquids. State and EPA regulators may use this documentation to assess whether the generator is meeting the ''no free liquids'' condition. This documentation only needs to be updated in the event that the generator changes its process for meeting the ''no free liquids'' condition.

5. Handling Facility Requirements

Handling facilities must accumulate, store, and manage disposable wipes in non-leaking, closed containers that are labeled ''Excluded Solvent-Contaminated Wipes'' when the wipes are not being processed or disposed, such as during storage at a combustor prior to being burned. Additionally, the container must also be able to contain free liquids should free liquids occur, for example, from percolation and compression of the wipes. See section VI.D.1 for more information regarding this standard.

Regarding solvent-contaminated wipes that are sent to a landfill for disposal, in the October 2009 NODA, EPA requested comment on two approaches based on the revised risk analysis for the rulemaking. The first approach would allow the disposal of solvent-contaminated wipes that did not exceed target risk criteria for an unlined landfill, based on the Agency's risk analysis, to be disposed in landfills without a liner. On the other hand, solvent-contaminated wipes that do pose a potential risk if disposed in an unlined landfill could only be disposed in a lined landfill. The second approach would direct all excluded solvent-contaminated wipes, including those that EPA estimated could be safely disposed in an unlined landfill, to be sent to a MSWLF subject to the requirements in 40 CFR 258.40(a)(2) and (b) (74 FR 55167–8). EPA stated in the October 2009 NODA that the second approach could be simpler since the generator would not need to separate the solvent-contaminated wipes and send them to separate disposal locations.

Comments were split on the two approaches; however, EPA agrees with those commenters that supported the second approach, because this approach avoids the need for generators to separate wipes contaminated with different solvents and to determine to which landfill the solvent-contaminated wipes may be sent. Based on these comments, EPA chose to allow disposable wipes to be sent to MSWLFs that are regulated under 40 CFR part 258, including the design criteria under § 258.40. This condition simplifies compliance for the tens of thousands of small businesses that are likely to take advantage of today's conditional exclusion, as well as for regulatory authorities that are responsible for monitoring compliance with this rule, while ensuring protection of human health and the environment for all solvent-contaminated wipes. Thus, under today's conditional exclusion, solvent-contaminated wipes are not allowed to be disposed in other types of landfills, such as non-hazardous waste industrial landfills operating under 40 CFR part 257, because these landfills are not required to meet design standards, such as liners. If EPA would have allowed use of the part 257 landfills, additional requirements would have been necessary to ensure that solvent-contaminated wipes are disposed in appropriate landfills, thereby increasing the burden on the regulatory community and the regulatory agencies. See section VIII for more information.

Landfills operating under the 40 CFR part 258 MSWLF standards must comply with design standards,[26] groundwater monitoring, leachate collection, and other specific management standards. These standards ensure that the solvent-contaminated wipes included under today's rule can be safely disposed without exceeding target risk criteria. All MSWLFs are required to meet the part 258 MSWLF standards. Generator facilities likely already use these landfills for disposal of other solid waste trash and thus, should not encounter difficulty in complying with this requirement.

Of course, generators may continue to send solvent-contaminated wipes to a permitted hazardous waste landfill regulated under 40 CFR parts 264 or 265. If all the conditions of the exclusion are met, these solvent-contaminated wipes would not be hazardous wastes under today's rule and thus, would not be subject to the hazardous waste standards (such as a manifest) when transported to a hazardous waste landfill.

Regarding solvent-contaminated wipes that are sent to a combustor for disposal, in the November 2003 proposed rule, we proposed that municipal and other non-hazardous waste combustors be allowed to burn solvent-contaminated wipes that meet the proposed conditions for the exclusion from the definition of hazardous waste. The Agency explained that allowing combustion of solvent-contaminated wipes in municipal waste combustors and other non-hazardous waste combustion units, such as commercial and industrial solid waste incinerators (circumstances when the wipes are used a fuel are included), is a viable alternative for managing conditionally-excluded wipes. First, combustion facility owners/operators would be screening wipes contaminated with hazardous solvents that arrive at their facilities to ensure they do not violate local permit conditions. In addition, these combustors are easily capable of destroying the solvent, as described in section IV.F.11 of the Technical Background Document (68 FR 65602). EPA went on to explain that EPA has promulgated revised air emission standard requirements under the New Source Performance Standards for municipal waste combustors and commercial and industrial solid waste incinerators (68 FR 65602).

Some commenters raised the concern that some combustion units allowed in the November 2003 proposal would not address dioxin and furan formation and that combustors receiving large quantities of solvent-contaminated wipes containing halogenated solvents (listed F001 and F002 solvents) could become a significant source of dioxin emissions. However, the New Source Performance Standards, which are promulgated under section 129 of the CAA, already require that municipal waste combustors and other solid waste combustion facilities comply with numerical emission limitations and performance standards that address emissions of dioxin and furans, as well as other air pollutants, such as mercury, particulate matter, sulfur dioxide, nitrogen oxides, semi-volatile metals, lead, cadmium, hydrogen chloride, and carbon monoxide. To eliminate confusion regarding how the New Source Performance Standards apply to municipal waste combustors and other solid waste combustion facilities, we are clarifying in the regulatory language that we are allowing disposable wipes that meet the conditions of today's rule to be sent to municipal waste combustors and other combustion facilities that are regulated under the New Source Performance Standards in section 129 of the CAA.

Of course, generators may also continue to send solvent-contaminated

[26] The 40 CFR part 258.40 regulations allow for composite liners or for a state-approved design of the landfill that ensures that the concentration values of certain contaminants listed in the rules will not be exceeded in the uppermost aquifer at the relevant point of compliance.

wipes to a hazardous waste combustor regulated under 40 CFR parts 264 or 265, or a hazardous waste boiler and industrial furnace regulated under 40 CFR part 266 subpart H. If all of the conditions of the exclusion are met, these solvent-contaminated wipes would not be hazardous waste under today's rule and thus, would not be subject to the hazardous waste standards (such as a manifest) when transported to a hazardous waste combustor.

Though rare, free liquids may inadvertently make their way to the handing facility as a result of compression, gravity, or percolation effects on the wipes during transport or by improper management of the solvent-contaminated wipes by the generator prior to transport. Under today's conditional exclusion for disposable wipes, free liquids must be removed by the handling facility and must be managed according to the applicable hazardous waste regulations under 40 CFR parts 260 through 273. EPA does not intend for this provision to require any additional effort beyond that of a handling facility's normal operations and monitoring practices. However, should free liquids be discovered at any point, these free liquids must be managed according to applicable hazardous waste regulations. Under this provision, removal of free liquid spent solvent by the handling facility would not automatically affect the regulatory status of the solvent-contaminated wipes. Solvent-contaminated wipes would still remain subject to the conditional exclusion provided the generator complied with the conditions of the exclusion.

Any residuals generated from the combustion of solvent-contaminated wipes (*e.g.,* ash) that exhibit a hazardous characteristic according to Subpart C of 40 CFR part 261 must be managed according to the applicable requirements of 40 CFR parts 260 through 273. This is consistent with the way the existing hazardous waste regulations apply to any waste stream.

VIII. Major Comments on the November 2003 Proposed Rule

EPA received several hundred comments on the November 2003 proposed rule. Commenters included generating facilities, reusable wipe suppliers and industrial laundries, disposable wipe manufacturers, environmental organizations, state agencies, and individual citizens. This section of the preamble addresses the major comments received on this rulemaking. (All comments received during the comment periods on the proposed rule and the October 2009 NODA are addressed in response to comments documents, which are available in the docket for today's rule.)

A. Definitions

In the November 2003 proposal, EPA proposed to add several definitions to 40 CFR 260.10 that related to the two exclusions for solvent-contaminated reusable and disposable wipes. These definitions were ''disposable industrial wipe,'' ''industrial wipe,'' ''industrial wipes handling facility,'' ''intra-company transfer of industrial wipes,'' ''no free liquids,''[27] ''reusable industrial wipe,'' and ''solvent extraction.''

Comments: Definitions

Some commenters argued that definitions for ''disposable industrial wipe'' and ''reusable industrial wipe'' are not needed because these terms are only used in the preamble to the proposed rule and are not used in the regulatory language.

Another commenter urged EPA to add a definition of ''solvent-contaminated industrial wipe'' to the final rule because the phrase is used several times in the proposed regulatory language. If added, the commenter felt that this definition could then replace the language in the two proposed exclusions that explains which solvents are included in the exclusions. Still other commenters wanted EPA to expand the scope of ''solvent-contaminated industrial wipe'' to include non-listed spent solvents that are ignitable hazardous wastes. Additionally, many commenters urged EPA to clarify the scope of the conditional exclusions to include solvent-contaminated wipes that exhibit the characteristic of ignitability due to co-contaminants, arguing that EPA's proposed regulatory language did not match with its preamble discussion at 68 FR 65602.

Other commenters suggested deleting the word ''industrial'' from ''industrial wipe'' because this term may block non-industrial sources, such as laboratories, academic institutions, and government entities, from using the exclusions. Some commenters suggested modifying the definition of ''industrial wipe'' to include sponges, coveralls, uniforms, floor mats, and personal protective equipment, as these may also become contaminated with solvent and could be safely managed under the rule's conditions. Commenters also said that EPA should add other fabrics to the definition of ''industrial wipe,'' to include materials such as acrylic, rayon, acetate, and cotton tip swabs. Similarly, commenters suggested including the term ''absorbent materials'' to account for future material types.

EPA Response: Definitions

We agree with commenters that said ''disposable industrial wipe'' and ''reusable industrial wipe'' do not need to be defined in the regulations because these terms are only used in the preamble to the November 2003 proposed rule (as well as the preamble to today's rule) and are not used in the regulatory language. We have thus deleted these definitions from the final rule.

We also agree with the comments that suggested adding a definition of ''solvent-contaminated wipe'' to the regulations. This definition simplifies the exclusions in 40 CFR 261.4(a)(26) and (b)(18) because these exclusions can now simply refer to the term ''solvent-contaminated wipe'' without having to duplicate the entire definition in those places. The definition of ''solvent-contaminated wipe'' in today's final rule is generally consistent with the November 2003 proposed regulatory language, with some modifications. In response to comments that pointed out EPA's inconsistency between its preamble and proposed regulatory language, EPA has made clear in the regulatory language that solvent-contaminated wipes that are co-contaminated with contaminants that exhibit only the hazardous waste characteristic for ignitability found in 40 CFR part 261 subpart C are eligible for today's rule. (However, the exclusions are not applicable to wipes that contain listed hazardous waste other than solvents, or exhibit the characteristic of toxicity, corrosivity, or reactivity due to contaminants other than solvents.) Additionally, EPA agrees with commenters that wipes containing non-listed spent solvents that exhibit only the hazardous waste characteristic for ignitability should also be included in the scope of this rulemaking because the same arguments presented in EPA's proposed rule (that the wipes are already likely to be ignitable because of the nature of the solvents on them and because this risk is managed by the conditions of the exclusion) also apply to this category of wipes.

Furthermore, we agree with the comments stating that the term ''industrial'' should be deleted from ''industrial wipe.'' We did not intend to make ''non-industrial'' entities, such as laboratories, academic institutions, and government agencies, ineligible for

[27] Response to comments on the definition of ''no free liquids'' can be found under section G in this section.

these conditional exclusions and agree that the term ''industrial'' confuses this issue. In today's rule we, therefore, refer to ''solvent-contaminated wipe'' or simply ''wipe'' and have deleted all references to ''industrial'' wipe.

We have simplified the definition of ''wipe'' to include several types of material and have added ''other material'' to include materials not specifically listed or potential future materials. However, we do not agree with adding items such as uniforms or personal protective equipment because these do not meet the common sense definition of ''wipe.'' We also have not evaluated whether these items could be safely managed under the rule and thus, are not including these in today's rule. Additionally, a device or unit (such as a cartridge) that contains a solvent-contaminated wipe as part of the unit does not fit today's definition of ''wipe'' and is not eligible for today's exclusions. However, if the wipes are removed from the unit, these wipes could be eligible for the exclusions, provided the conditions of the exclusions are met. Lastly, EPA confirms that cotton swabs, such as those used to clean ink jet heads, are eligible for the exclusions in today's rule, provided the conditions of the exclusions are met.

Lastly, we note that we have deleted the proposed definitions ''industrial wipes handling facility'' and ''intra-company transfer of industrial wipes'' because these definitions relate to the intra-company transfer provision, which we are not finalizing in today's rule. See section VIII.J below for our response to comments on intra-company transfers. We also deleted the definition of ''solvent extraction'' because, due to changes to the definition of ''no free liquids,'' the final rule does not use this term.

B. Solid Waste vs. Hazardous Waste Exclusion for Reusable Wipes

In the November 2003 proposal, EPA proposed to exclude reusable wipes from the definition of solid waste on the basis that reusable wipes are more commodity-like than waste-like. EPA used the criteria in 40 CFR 260.31(c), which states that a material's commodity-like properties can be a basis for a variance from being a solid waste. EPA stated that reusable wipes are more commodity-like because (1) the solvent-contaminated wipe is being partially reclaimed (that is, spun in a centrifuge, wrung out, or allowed to drain solvent); (2) the reusable wipes are counted at the laundry and the process keeps users financially accountable for the wipes; and (3) the reusable wipes are owned by the same entity (the laundry) throughout the process. EPA also requested comment on an alternative option to exclude reusable wipes from the definition of hazardous waste, which would be the same exclusion as proposed for disposable wipes.

Comments: Solid Waste vs. Hazardous Waste Exclusion for Reusable Wipes

Several commenters argued that EPA should maintain the proposed approach to exclude solvent-contaminated reusable wipes from the definition of solid waste. These commenters argued that there is no element of discard in the case of sending reusable wipes to laundering or dry cleaning facilities. The solvent-contaminated wipes are collected, handled, and re-used as valuable commodities and are not being discarded, thrown away, or abandoned. Thus, reusable wipes are not solid wastes and should be treated separately from disposable wipes. Some commenters also warned that EPA would be overriding the decisions of at least 20 states that already exclude reusable wipes from the definition of solid waste. Commenters believed that this would result in facilities in those states becoming subject to state solid waste programs, including the imposition of fees, detailed permitting requirements, restrictive management conditions, complex site assessments, and frequent testing and recordkeeping requirements on ''solid waste'' generators and processors. Furthermore, commenters believed including reusable wipes as solid wastes would discourage reuse.

Other commenters argued in favor of EPA's alternative option and supported excluding reusable wipes from the definition of hazardous waste. These commenters believed that reusable wipes were spent materials and thus, should be considered solid wastes along with disposable wipes. These commenters argued that the subject of the rulemaking should be the hazardous solvent, not the wipe itself. While laundered wipes will be reused, commenters noted that the hazardous solvent on them is intended for disposal and, therefore, the exclusion should be from hazardous waste regulation, not solid waste regulation. At least one commenter argued that EPA failed to consider all the criteria in 40 CFR 260.31(c) (partial-reclamation variance). These comments concluded that reusable wipes could not meet the specific criteria in the partial reclamation variance, and thus, should not be excluded from the definition of solid waste.

At least two commenters believed both reusable and disposable wipes should be managed as hazardous waste under the universal waste regulations. Several commenters urged EPA to make the conditions for both reusable and disposable wipes the same, regardless of the type of exclusion, to reduce burden of implementation and compliance monitoring.

EPA Response: Solid Waste vs. Hazardous Waste Exclusion for Reusable Wipes

EPA agrees with those commenters that argued that EPA should exclude reusable wipes from the definition of solid waste as the Agency proposed in the November 2003 proposed rule (and consequently, disagrees with those commenters that argued for a hazardous waste exclusion). Given the nature of the solvent-contaminated wipe, the inherent economic value of the wipe, and the characteristics of the reusable wipe market, reusable wipes managed under today's exclusion are not solid wastes. See the Agency's basis for this solid waste exclusion in section VI.B above.

Because reusable wipes are not solid wastes under today's conditional exclusion, today's rule should not impact how state solid waste programs currently apply to generators and handlers of solvent-contaminated wipes. Additionally, we generally agree with commenters that believed excluding reusable wipes from the definition of solid waste may encourage reuse because it removes the label of ''solid waste'' from the reusable wipes.[28]

Additionally, we do not agree with comments that argued that the solvent-contaminated wipe itself is a solid waste because the residuals (solvents) from the reclamation process will eventually be discarded. EPA's long-standing policy regarding legitimate recycling does not require that 100% of the hazardous secondary material be reclaimed in order to be legitimately recycled. In addition, as a condition of the exclusion, at the point of transport for cleaning or disposal, the solvent-contaminated wipes and their containers must contain no free liquids as defined in 40 CFR 260.10, thus helping to ensure that free liquid spent solvents are not being discarded.

In response to comments on the application of the partial reclamation variance criteria to reusable wipes, it was not EPA's intention in the proposal to specifically apply the criteria found in 40 CFR 260.31(c) to solvent-

[28] These benefits are estimated in section 5.4 of the ''Regulatory Impact Analysis'' for today's rule.

contaminated wipes being laundered or dry cleaned. Rather, the Agency intended to present the concept of the partial reclamation variance as a general framework to determine whether reusable wipes are ''commodity-like.'' The proposal then lists the three considerations underpinning our position that reusable wipes are ''commodity-like'' and thus, not solid wastes.

As stated in RCRA section 1004(27), ''solid waste'' is defined as ''any garbage, refuse, sludge from a waste treatment plant, or air pollution control facility and other discarded material . . . resulting from industrial, commercial, mining, and agricultural activities.'' While the spent solvent removed from solvent-contaminated wipes in the form of free liquids may be solid and hazardous wastes, the reusable wipes are not. In the November 2003 proposed rule, EPA used the ''commodity-like'' criteria as a framework for explaining why solvent-contaminated reusable wipes are not solid wastes when they meet the conditions of the exclusion, and those same considerations remain valid, including (1) the fact that solvent-contaminated wipes can be processed to remove free liquids, (2) the fact that the wipes are managed as valuable commodities throughout their lifecycle, and (3) the fact that ownership of the wipes remains the same throughout the process (68 FR 65593, November 20, 2003). However, the Agency did not intend to imply that the solid waste exclusion for solvent-contaminated wipes was the same as a partial reclamation variance. See section VI.B for further discussion of the Agency's basis for excluding reusable wipes from the definition of solid waste.

Lastly, we do not agree that reusable wipes should be managed under the universal waste standards. Universal wastes are hazardous wastes and EPA believes that reusable wipes managed under today's exclusion are not solid and hazardous wastes. Additionally, managing reusable wipes as hazardous wastes under the universal waste regulations may, as some commenters argued, increase burden on facilities generating and managing reusable wipes as a result of state solid waste program requirements.

We note that today's solid waste exclusion for reusable wipes results in the least interference with individual state programs. It is consistent with those states that already exclude reusable wipes from the definition of solid waste. Additionally, under RCRA, authorized states can be more stringent than the federal program. Thus, states that currently exclude reusable wipes from the definition of hazardous waste may continue to do so, provided the conditional exclusion is as stringent as today's final rule. The same applies for those states that wish to manage reusable wipes as hazardous waste.

C. Toxicity Characteristic Solvents

Of the listed solvents that EPA examined under the November 2003 proposal, six are solvents that are also subject to the toxicity characteristic (TC) levels found in 40 CFR 261.24.[29] For the TC solvents, EPA proposed to defer to the TC regulations, noting: ''EPA's analysis finds that even when they have been through an advanced solvent-extraction process and contain less than five grams of solvent, the levels of these solvents in contaminated industrial wipes are likely to be higher than the regulatory levels indicated in 40 CFR 261.24. Therefore, these TC solvents are ineligible for disposal in municipal and other non-hazardous waste landfills because of their potential risk, as determined when they were originally identified by EPA as TC wastes'' (68 FR 65598). In other words, under the November 2003 proposal, wipes contaminated with one or more of these six solvents would be ineligible for the conditional exclusion for disposable wipes and would continue to be regulated as hazardous waste because they exhibit the toxicity characteristic. EPA requested comment on this issue.

EPA included the TC solvents in the revised risk analysis presented in the October 2009 NODA and has since updated the analysis with the recently published IRIS reference values for tetrachloroethylene and trichloroethylene (see section III.D for further discussion of the 2009 revised risk analysis). The results of the 2012 final risk analysis using the revised IRIS values demonstrates that wipes contaminated with five of the six TC solvents do not present elevated risks when disposed in a composite-lined landfill. Wipes contaminated with trichloroethylene, however, do exceed risk-based criteria when disposed in a composite-lined landfill.

Comments: Toxicity Characteristic Solvents

Commenters objected to EPA's use of the TC criteria to prohibit solvent-contaminated wipes from being landfilled as a non-hazardous waste arguing that the TC uses assumptions and parameters that are not applicable to wipes. Commenters, therefore, requested that EPA remove the provision that prohibits solvent-contaminated wipes exhibiting the characteristic of toxicity solely as a result of contamination with a TC solvent from being disposed in municipal and other non-hazardous waste landfills if those solvents were not found to pose a significant risk.

EPA Response: Toxicity Characteristic Solvents

For solvent-contaminated wipes, EPA agrees with those commenters who argued that the TC criteria should not be used to prohibit solvent-contaminated wipes from being conditionally excluded from hazardous waste regulation. We have decided to use the results of the 2012 final risk analysis rather than apply the TC regulations to determine whether solvent-contaminated wipes can be disposed as solid wastes in MSWLFs. Therefore, wipes contaminated with benzene; chlorobenzene; o-,m-,p-creosols; methyl ethyl ketone; and/or tetrachloroethylene are eligible for the conditional exclusion for disposable wipes provided they meet the conditions of the exclusion.[30]

The Agency undertook a comprehensive risk analysis to estimate the potential risk from disposal of solvent-contaminated wipes and laundry sludge in MSWLFs. The 2009 revised risk analysis was subjected to external peer review and presented for public comment in a NODA (October 27, 2009; 74 FR 55163). In support of this analysis, EPA (1) collected and reviewed information (*e.g.,* current industry practices, state programs, landfill loadings) from a wide variety of sources (*e.g.,* site visits, data collected by EPA for RCRA and other regulatory programs, public comments, and other available information); (2) used probabilistic methods to characterize the variability and uncertainty associated with the risk modeling; (3) developed and used a state-of-the-art landfill model and examined the exposure pathways that pose the greatest potential risk; (4) included updated information for various input parameters, when such information was provided in the comments; and (5) recalculated the potential risks by using the most up-to-date human health toxicity benchmarks made available after the October 2009 NODA was published. For further discussion of the

[29] The six TC solvents are Benzene, Chlorobenzene, o-,m-,p-Creosols, Methyl ethyl ketone, Tricholorethylene, and Tetrachloroethylene.

[30] However, wipes contaminated with trichloroethylene would still be subject to the TC because the results of the final risk analysis demonstrate that these wipes present a significant risk when disposed in a composite-lined landfill. See section III.D for further discussion.

risk analysis, including peer review, see section III.D.

The 2009 revised risk analysis presented in the October 2009 NODA included a variety of conservative assumptions to ensure that potential risks from landfill disposal were assessed protectively. Furthermore, our evaluation was based on the risks at the upper end of the risk distributions, *i.e.*, the 90th percentile in the probabilistic analyses. Therefore, we are confident that the solvents present in the wipes and sludge would not present a significant risk. The 2012 final risk analysis represents a comprehensive characterization of the risk posed by these solvent-contaminated wipes and, therefore, EPA concludes that this is appropriate information to use in determining whether solvent-contaminated wipes should be excluded from the definition of hazardous waste.

The 2012 final risk analysis for the six solvents that are also TC chemicals (benzene, chlorobenzene, cresols, methyl ethyl ketone, tetrachloroethylene, and trichloroethylene) indicated that five of the chemicals have risks well below the target criteria used.[31] The one solvent that presents risks above the criteria is trichloroethylene, which is therefore ineligible for the conditional exclusion for disposable wipes being promulgated today. In addition, the exclusion only applies to disposable wipes; other industrial wastes, including solvent wastes not associated with wipes, will continue to be regulated as listed or characteristic hazardous waste, as applicable. Therefore, there are regulations in place to restrict disposal of solvent chemicals from other sources in municipal landfills.

D. Containers

In the November 2003 proposal, EPA proposed that solvent-contaminated reusable and disposable wipes must be stored in non-leaking, covered containers. The preamble explained that a covered container could range from a spring-operated safety container to a drum with its opening covered by a piece of plywood. EPA stated in the proposal that generators would not need to seal, secure, latch, or close the container every time a solvent-contaminated wipe is placed inside the container; rather, they would only need to ensure that the container was covered. EPA also proposed that solvent-contaminated wipes must be transported in containers that are designed, constructed, and managed to minimize loss to the environment. EPA explained this to mean that the containers must not leak liquids and must control emission releases to the air. The Agency stated it would consider containers that met the Department of Transportation (DOT) packaging requirements for hazardous materials to meet the proposed performance standard, as would closed, sealed, impermeable containers. Finally, EPA proposed that handling facilities, such as laundries and combustors, must contain solvent-contaminated wipes in containers that met the transportation container standard or containers that met the generator container standard.

EPA also requested comment on requiring the transportation of wipes in impermeable ''closed'' containers. In this context, closed containers were defined as containers with a lid that screws on to the top and must be sealed to be considered closed. EPA also requested comment on whether or not EPA should defer to the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) regulations for the management of solvent-contaminated wipes during accumulation at the generator's facility. In addition, for reusable wipes, EPA sought comment on adding a provision that allows wipes containing less than five grams of solvent to be transported without any management standards and on whether cloth bags have the ability to meet the proposed performance standard of minimizing loss to the environment.

Comments: Containers

Over half of the commenters supported the covered standard for containers and agreed with a performance-based standard, which allows companies flexibility in meeting the standard. Many of these commenters noted that the covered standard reflects current industry practice and that this standard is adequate to control fugitive air emissions and potential risk of fire. These commenters stated that many businesses use large quantities of solvent-contaminated wipes each day, so to unseal and seal a container every time a wipe is placed inside it would be overly burdensome. Other commenters supported the performance-based standard because they feared a specific container standard (*e.g.*, a 55-gallon drum) could force laundries to purchase new vehicles in order to transport the required containers. Commenters also argued that EPA regulations should be consistent with DOT and OSHA standards for covered containers.

The remaining commenters opposed the covered standard, arguing it would not sufficiently protect human health and the environment. These commenters disagreed with EPA's assertion that containers covered with plywood or cardboard would be sufficient to prevent air emissions or prevent spills during accumulation and transportation. These commenters also opposed the use of cloth and woven polypropylene bags to store solvent-contaminated wipes because these bags are permeable and thus, would not prevent releases of free liquid spent solvent. They urged EPA to strengthen the container standard by requiring a performance-based ''closed'' container standard and requiring the use of impermeable bags. These commenters also called for one consistent container standard throughout the handling process, because there was no reason for having different standards for on-site accumulation, transportation, and handling.

EPA Response: Containers

EPA agrees with those commenters who argued that a strengthened container standard is necessary to protect human health and the environment. In the proposal, EPA explained that plywood over a container would meet the covered container standard; however, EPA acknowledges that this scenario would not always prevent releases, especially if the container was accidentally overturned. Therefore, EPA is not finalizing the proposed covered container standard and is instead requiring that solvent-contaminated wipes be accumulated, stored, and transported in non-leaking, closed containers, such as containers with a spring-loaded lid or an impermeable bag. Today's standard addresses commenters' concerns regarding spills and exposures to solvents in a covered container (*e.g.*, simply covering a container with plywood would not meet today's container standard and cloth bags, if used, would have to be non-leaking).

Regarding the closed container standard, EPA agrees with those commenters that argued that it is burdensome to unseal and seal a container every time a wipe is placed in the container. Therefore, today's closed container standard is defined to allow for flexibility during accumulation of solvent-contaminated wipes; during accumulation, a closed container does not need to be sealed and is considered closed when there is complete contact between the fitted lid and the rim,

[31] Risks for the five solvents in composite-lined landfills were below one tenth of the target risk criteria. See the risk results in ''F001–F005 Solvent-Contaminated Wipes and Laundry Sludge: Comparison of Landfill Loading Calculations and Risk-Based Mass Loading Limits,'' revised, April 2012, in the docket for the final rule.

except when it is necessary to add or remove solvent-contaminated wipes. Then, when the container is full, or when the solvent-contaminated wipes are no longer being accumulated, or when the container is being transported, the container must be sealed with all lids properly and securely affixed to the container and all openings tightly bound or closed sufficiently to prevent leaks and emissions.

Today's closed container standard more adequately addresses fugitive air emissions from the solvent-contaminated wipes than the proposed covered container standard and thus, will adequately protect facility employees, inspectors, emergency response personnel, transporters, and other downstream handlers. Moreover, EPA's non-leaking, closed container standard remains a performance-based standard, which many commenters supported because it provides generators the flexibility to meet the standard in a way that best suits their business without increasing compliance costs. Today's container standard should not be overly burdensome since several trade associations and laundries already encourage their members and customers to use closed or sealed containers during storage and transportation of solvent-contaminated wipes.

EPA also agrees with those commenters that argued that substantively different container standards for solvent-contaminated wipes during accumulation, transportation, and handling are not necessary. Today's container standard applies to solvent-contaminated wipes under both conditional exclusions and applies to accumulation and storage at the generating facility, transportation either on-site or off-site, and, finally, storage and management at the handling facility. This represents a simple and straightforward approach that eases implementation and compliance monitoring. Additionally, this condition replaces the proposed management condition for transporters and handlers to manage solvent-contaminated wipes in containers ''designed, constructed, and managed to minimize loss to the environment,'' which was subjective and thus, more difficult to interpret than today's container standard.

Furthermore, although today's rule does not impact how DOT or OSHA regulations apply to solvent-contaminated wipes, EPA has determined that it is not appropriate to rely solely on these regulations in lieu of a container standard.

E. Accumulation Time Limit

In the November 2003 proposal, EPA did not propose a time limit on accumulation for disposable wipes. However, EPA did propose to apply the speculative accumulation limits on reusable wipes consistent with other conditional exclusions from the definition of solid waste for recycling activities. The speculative accumulation provision requires that, in any calendar year, 75 percent of the material accumulated for recycling must actually be recycled. In addition, EPA requested comment on whether specific time limits should be imposed for accumulation and storage of both reusable and disposable wipes and specifically requested comment on whether generators should follow the accumulation time limits in 40 CFR 262.34 that are applicable for their generator status (*i.e.,* 90 days for large quantity generators and 180 days for small quantity generators). If the accumulation time limits in 40 CFR 262.34 were included in the final rule, generators would have to mark any container in which the solvent-contaminated wipes were being accumulated with a label that included the date accumulation started.

Comments: Accumulation Time Limit

The majority of commenters believed accumulation time limits for solvent-contaminated wipes are unnecessary and unwarranted. These commenters argued that because the wipes are no longer subject to regulation as hazardous waste there was no need for an accumulation time limit (and noted that EPA does not require accumulation limits on other solid non-hazardous wastes). Other commenters indicated that requiring transportation at 90 or 180 days would be burdensome for facilities generating small quantities of solvent-contaminated wipes. For reusable wipes, most commenters believed accumulation time limits were unnecessary because the vast majority of generators have contracts with laundries that stipulate weekly pickup of their solvent-contaminated wipes.

The remaining commenters suggested adopting an accumulation time limit. These commenters argued that accumulation limits would decrease the time solvent-contaminated wipes are managed on-site, thereby decreasing the risk of adverse affects to human health, such as from fires and volatilization. Furthermore, these commenters believed that generators do not have an incentive to remove solvent-contaminated wipes, and thus, specific accumulation time limits would be necessary in order to prevent over accumulation of wipes at generator facilities.

Several commenters supported applying the speculative accumulation provision to reusable wipes. These commenters believed reusable wipes should have the same management standards as other recycled hazardous secondary materials that are excluded from regulation under 40 CFR 261.4(a).

EPA Response: Accumulation Time Limit

EPA agrees with commenters that argued accumulation time limits for solvent-contaminated wipes are necessary. During the accumulation period, solvent-contaminated wipes may contain free liquids or free liquids may occur, for example, from percolation or compression of wipes in a container. Thus, in the absence of accumulation limits, generators may have an incentive to store solvent-contaminated wipes containing free liquids indefinitely in order to avoid potential hazardous waste disposal costs of the free liquid spent solvent. This accumulation time limit is appropriate because, although the solvent-contaminated wipes are not hazardous wastes when managed under today's exclusions, the free liquid spent solvent is subject to the applicable hazardous waste regulations upon its removal from the wipe and/or the container holding the wipe.

EPA, therefore, agrees with commenters that supported an accumulation time limit. An accumulation time limit ensures that free liquid hazardous waste solvent is removed within an appropriate timeframe. This condition also decreases the maximum amount of time that solvent-contaminated wipes are managed on-site, which further decreases the risk of adverse affects to human health, such as from fires and volatilization. Therefore, in today's final rule, EPA is establishing an accumulation time limit for both reusable and disposable wipes which allows solvent-contaminated wipes to be accumulated by the generator for up to 180 days prior to cleaning or disposal. Today's accumulation standard is necessary to ensure the proper disposition of the solvent-contaminated wipes and the free liquids that may accumulate in containers.

The regulations at 40 CFR 262.34 establish accumulation time limits based on the quantity of hazardous waste generated; however, solvent-contaminated wipes under today's exclusions are not hazardous wastes and thus, do not count towards the

generator's status. Therefore, strict compliance with the hazardous waste accumulation time limits presents an odd situation where a generator could be generating large amounts of excluded solvent-contaminated wipes, but only a small amount of other hazardous waste. It would seem inappropriate to require an accumulation time limit for solvent-contaminated wipes that are based on quantities of hazardous waste that don't include the solvent-contaminated wipes.

Furthermore, applying speculative accumulation limits, which is consistent with how other hazardous secondary materials excluded from the definition of solid waste are managed, is not appropriate. Solvent-contaminated wipes may contain free liquids during accumulation and applying speculative accumulation limits to today's exclusions would have allowed generators to accumulate solvent-contaminated wipes, and the associated free liquid spent solvent, for up to a year. This amount of time would likely have increased the quantity of free liquid spent solvent managed onsite and thus, may increase adverse affects to human health, such as from fires and volatilization.

To ensure solvent-contaminated wipes and any associated free liquid spent solvent are managed appropriately, while at the same time allowing the greatest flexibility and ease of compliance for generators, EPA chose to establish a flat 180-day accumulation time limit for all facilities generating solvent-contaminated wipes. This straightforward accumulation time limit is easier to implement by the tens of thousands of facilities that generate solvent-contaminated wipes. The 180-day accumulation time limit is what is currently required for small quantity generators under 40 CFR 262.34 and thus, provides the greatest flexibility for generators managing excluded solvent-contaminated wipes.[32]

We agree with commenters that reusable wipes are routinely picked up by laundries on a periodic (*e.g.,* weekly) basis and, thus, today's accumulation time limit is not likely to impose an undue burden. Additionally, disposable wipes meeting the conditions of today's rule may be discarded with a facility's other solid waste trash, which is likely collected on a frequent basis. We also note that the free liquids, upon removal from the solvent-contaminated wipes or from the container holding the wipes, are subject to the applicable hazardous waste regulations, including accumulation time limits in 40 CFR 262.34.

F. Labeling

In the November 2003 proposal, EPA proposed that containers managing disposable wipes be labeled ''Exempt Solvent-Contaminated Wipes'' to alert downstream handlers to the contents of the container and ensure proper handling and/or inspection of the materials. EPA did not propose a similar labeling condition for reusable wipes because laundries and dry cleaners typically have agreements with their customers and thus, already know what is in the container of wipes that arrive. However, EPA requested comment on whether a labeling requirement was necessary for reusable wipes containers.

Comments: Labeling

Some commenters agreed with EPA that containers that hold disposable wipes should be labeled. These commenters believed that labeling was necessary in order to allow identification of the containers' contents for emergency response personnel, motor carrier inspectors, transporters, and downstream handlers. Other commenters also believed that labeling is good business practice and that it would not be burdensome to implement.

On the other hand, other commenters were opposed to the labeling requirement because it constituted an undue burden on generators. These commenters also argued that the DOT labeling requirements would be sufficient and that EPA should not create a duplicative label. Furthermore, these commenters noted that since generators would have contractual arrangements with any handling facility, the downstream handlers would already know the contents of the containers. Some commenters also argued that facilities generating both non-hazardous wipes—that is wipes that are not used with listed hazardous waste and do not exhibit characteristics of hazardous waste—and excluded disposable wipes would need to separate the wipes in order to meet the labeling condition, even though both types would be sent to, for example, the same MSWLF.

The majority of commenters, however, recommended the same labeling requirement should apply to both disposable and reusable wipes. Most of these commenters did not take a position on whether or not such a requirement was necessary, but argued that, if a label was necessary, then it should apply equally to both disposable and reusable wipes.

EPA Response: Labeling

EPA agrees with the majority of commenters that the labeling requirement should be applied to both disposable and reusable wipes. Concerns regarding air emissions and potential fire risk apply to all solvent-contaminated wipes regardless of their ultimate disposition. Although DOT packaging requirements may apply, as appropriate, to the transport of reusable and disposable wipes, it is important to require labeling during accumulation, storage, and at the handling facility in order to communicate the contents to facility employees, emergency response personnel, downstream handlers, and state and EPA inspectors, as well as transporters and motor carrier inspectors. Thus, in today's rule, we are requiring that solvent-contaminated wipes must be managed in containers labeled ''Excluded Solvent-Contaminated Wipes.'' Imposition of this condition addresses comments that urged EPA to adopt the same labeling standard for both types of wipes in order to ease implementation and understanding of the regulations, especially for facilities that use both reusable and disposable wipes.

The Agency does not believe that this condition places an undue burden on facilities, as labels are relatively inexpensive and can be affixed to containers with relative ease. Additionally, generators of disposable wipes, which have generally been heretofore regulated as hazardous wastes, have already had to comply with labeling requirements under the hazardous waste regulations.

G. ''No Free Liquids'' and ''Dry'' Conditions

In the November 2003 proposal, EPA proposed that reusable wipes going to an industrial laundry or dry cleaner and disposable wipes going to a combustor must have no free liquids when sent off-site. We proposed defining ''no free liquids'' as allowing no liquid solvent to drip from the wipe when sent off-site and no free liquids in the bottom of the container in which the wipes are transported for cleaning or disposal. EPA explained that generators could meet the ''no free liquids'' condition by ensuring that a solvent-contaminated wipe held for a short period of time, such as when being moved from one container to another, does not drip. Facilities could use mechanical

[32] The regulations at 40 CFR 262.34 also allow small quantity generators to accumulate hazardous wastes for up to 270 days if the generator must transfer the waste to a facility located more than 200 miles from the generator. However, because solvent-contaminated wipes managed under today's rule can go to municipal solid waste landfills, we anticipate that transportation distances will be shortened given the greater number of available options under today's rule.

wringers, solvent extraction technologies or process knowledge to meet the standard. Screen-bottom drums could also be used to ensure no liquid solvent was in the bottom of the container used to transport the solvent-contaminated wipes for cleaning or disposal.

For wipes going to a landfill, EPA proposed that the solvent-contaminated wipes meet a ''dry'' condition. ''Dry'' was defined as a wipe containing less than five grams of solvent. To meet the ''dry'' condition, generators could use a centrifuge or other solvent extraction technologies, use less than five grams of solvent per wipe, or use normal business records that indicate solvent usage rates, such as the total amount of solvent used each month divided by the number of wipes used each month. Generators could also conduct sampling to ensure the solvent-contaminated wipes met the condition.

EPA also requested comment on a ''no free liquids when wrung'' condition that would require that each wipe not drip solvent when hand wrung.

Comments: No Free Liquids

Many commenters supported the ''no free liquids'' condition for solvent-contaminated wipes going to laundries/dry cleaners and combustors. Some commenters noted that this is already standard practice for solvent-contaminated wipes going to laundries and dry cleaners and is used by many states in their regulations for reusable wipes. Commenters believed that ensuring that the solvent-contaminated wipes do not contain free liquids would prevent releases of solvents in transportation to handling facilities.

Most commenters urged EPA not to place a specific limit on the maximum amount of solvent or the concentration of solvent on a wipe and not to place a numerical limit on the number of shop towels laundries or dry cleaners can accept on an annual basis. They asserted that a limit on the number of solvent-contaminated wipes that can be sent for cleaning would adversely impact the manufacturing process and would be confusing and essentially impossible to implement. They also argued that limits on the amount or concentration of solvent are unnecessary, particularly because CWA/NPDES permits impose enforceable limits on point source discharges to waterways from laundries and dry cleaners through industrial user and pretreatment requirements.

Some commenters suggested that EPA clarify the ''no free liquids'' condition and recommended that EPA specify permissible technologies that are presumed to meet the ''no free liquids'' condition. Other commenters disagreed that EPA should compile a list of acceptable technologies. Moreover, some commenters urged EPA to finalize a standard that is simple enough for hundreds of thousands of businesses to apply daily and clear enough to avoid confusion during inspections and enforcement.

Many commenters did not support EPA's alternative condition of ''no free liquids when wrung'' because requiring each solvent-contaminated wipe to be wrung would unnecessarily expose employees to solvents. Additionally, ''when wrung'' is too subjective a standard and creates confusion (for example, ''when wrung'' is dependent on the size and strength of the individual doing the wringing). Still other commenters supported the ''when wrung'' alternative, arguing that the condition would result in more solvent removed from the wipe.

EPA Response: No Free Liquids

EPA agrees with commenters that supported the ''no free liquids'' condition, particularly because this is currently standard industry practice and is used by many states in their programs, and thus, is already familiar to the regulated community and state regulators. One concern, however, is how to define and make the ''no free liquids'' condition an objective, clear, and enforceable standard. Some commenters suggested defining a list of solvent extraction technologies to meet this standard; however, it is not appropriate to require the use of specific technologies, particularly if such specific technologies are not necessary under certain circumstances to meet the condition and may impose unnecessary cost on businesses. Furthermore, technologies evolve over time and rulemaking would be required to incorporate new technologies into the rule. To reduce confusion, we have deleted the definition of ''solvent extraction'' from the final rule and have eliminated any reference to this term in the definition of no free liquids.

Presently, many state agencies have established several methods for verifying compliance with state- imposed ''no free liquids'' conditions. The majority of states require the use of the Paint Filter Liquids Test (SW–846, Method 9095), while other states require the Liquids Release Test (SW–846, Method 9096) or the Toxicity Characteristic Leaching Procedure (TCLP) (SW–846, Method 1311), among other state defined standards. Defining ''no free liquids'' in terms of an objective test enables better implementation and compliance monitoring. By defining ''no free liquids'' in terms of a standard test, we are also addressing the spirit of many commenters that argued that EPA should specify technologies that would meet this condition (*i.e.*, EPA should finalize a more objective definition of ''no free liquids''). While all of the above tests are objective, for today's rule, EPA is using the Paint Filter Liquids Test for determining whether solvent-contaminated wipes contain free liquids. The Paint Filter Liquids Test is already used for determining compliance with the ''no free liquids'' condition by many states and is also the test used to implement the restrictions on disposal of free liquids in the MSWLF regulations (40 CFR 258.28). The Paint Filter Liquids Test is simple, straightforward, and generally less costly than the other test methods considered.

EPA notes that generators do not have to conduct the Paint Filter Liquids Test for every solvent-contaminated wipe. Rather, generators must ensure that if the Paint Filter Liquids Test was performed, the wipe would pass.

Where authorized states have defined ''no free liquids'' using a different standard, generators in those states must meet the state standard for purposes of meeting the ''no free liquids'' condition. This ensures that today's rule complements existing state policies and, thus, does not place an unnecessary burden on states and the regulated community to change existing practices. Of course, the authorized state standard must be no less stringent than today's definition of ''no free liquids.'' See section VI.D.3 for more information.

EPA agrees with the majority of commenters that argued a specific limit on the maximum amount of solvent, or the concentration of solvent on a wipe, or a numerical limit on the number of shop towels laundries or dry cleaners can accept on an annual basis is not necessary and would be burdensome to implement. We agree that the regulations under the CWA already impose enforceable limits on point source discharges to waterways through industrial user and pretreatment requirements. Today's rule enforces this by requiring that solvent-contaminated wipes only be sent to laundries and dry cleaners whose discharge, if any, are regulated under applicable sections of the CWA.

Moreover, EPA agrees that the ''no free liquids when wrung'' condition could increase, or at least be perceived to increase, workers' exposure to solvents. Today's definition of when solvent-contaminated wipes contain no free liquids is sufficient to reduce the

probability of free liquids being transported under today's rule.

Comments: ''Dry'' Condition

The majority of comments on this issue disagreed with EPA's proposed ''dry'' condition for disposable wipes going to landfills. Specifically, commenters argued that the five gram limit per wipe was arbitrary, inconvenient, unworkable, time-consuming, and potentially cost-prohibitive to businesses, many of which are small businesses. Additionally, some commenters pointed out that wipes vary in terms of size, composition, absorbency, and thickness and that, in some cases, a wipe may meet the ''dry'' condition (less than five grams of solvent) but still have liquid solvent that could drip from the wipe and thus, be released to the environment. In response to EPA's proposed methods of meeting the ''dry'' condition, commenters stated that solvent extraction technology was not easily attainable or affordable. Commenters also argued that EPA's proposal to use normal business records to comply with the condition would be difficult to implement and may in fact be an incentive for facilities to use more disposable wipes than necessary, such as dividing the amount of solvent by an even larger amount of wipes used each month. Therefore, many commenters urged EPA to abandon the ''dry'' condition and require solvent-contaminated wipes going to landfills to meet the ''no free liquids'' or ''no free liquids when wrung'' condition instead. Many commenters also argued that the same standard should be applied to both reusable and disposable wipes in order to ease implementation, especially for facilities that use both types of wipes.

Of the few commenters that did support the ''dry'' condition, some argued that this approach is the only practical way to assure disposable wipes do not contain excessive levels of solvents when sent to municipal or non-hazardous waste landfills. Other commenters supported the ''dry'' condition as long as EPA specified in the regulations which extraction technologies can be presumed to meet the five gram standard, which would assist implementation and compliance monitoring.

Still another commenter argued that the five gram limit per wipe was not stringent enough because the solvent would exceed the Land Disposal Restriction standards for disposal.

EPA Response: ''Dry'' Condition

Based on the comments, the Agency has decided not to finalize the ''dry'' condition for disposable wipes going to landfills, as it would be burdensome to implement and enforce. In addition, as noted by commenters, setting a firm quantitative limit on the amount of solvent in each wipe does not take into account the diverse sizes and types of wipes in the marketplace. For example, it's possible that some wipes could contain less than five grams of solvent and still have free liquids. Some commenters believed we could improve the ''dry'' condition by specifying a list of technologies that could be used to achieve the standard; however, we understand that these technologies are expensive and may not always be necessary depending on the type of wipe and the amount of solvent used. Furthermore, technology changes over time and thus, specifying a list in the regulations may unnecessarily preclude newer technologies.

In choosing what standard to use in place of the ''dry'' condition, we relied on the results of our risk analysis, which evaluated various industries, the amount of solvent that was typically placed on wipes, and how much solvent would eventually be placed into landfills. After estimating the amount of solvent that could be on a wipe before disposal and the number of generators potentially disposing of solvent-contaminated wipes into a MSWLF, the 2012 final risk analysis demonstrated that 19 of the 20 solvents evaluated did not exceed target risk criteria when placed into a composite-lined landfill. Therefore, the ''no free liquids'' condition is appropriate to use to ensure that solvent-contaminated wipes going to landfills do not exceed the risk thresholds. Furthermore, the ''no free liquids'' condition is consistent with what is currently required in the 40 CFR part 258 MSWLF standards. By using the same standard for disposable and reusable wipes, we are able to address those comments that urged EPA to finalize the same condition for both types of wipes in order to ease implementation and understanding of the regulations, especially for facilities that use both reusable and disposable wipes.

EPA does not agree with the commenter that argued that the five gram limit per wipe was not stringent enough because the solvent would exceed the Land Disposal Restriction standards for disposal. The Agency has conducted a robust risk analysis that demonstrates the solvent-contaminated wipes included under the exclusion for disposable wipes do not exceed risk thresholds when disposed in a composite-lined landfill.

H. Recordkeeping

In the November 2003 proposal, EPA did not propose any recordkeeping requirements for the conditional exclusion for reusable wipes or for the conditional exclusion for disposable wipes. However, we did request comment on a number of recordkeeping options, such as requiring handling facilities that receive shipments of solvent-contaminated wipes with free liquids to submit a notification to the state or EPA region. Additionally, we requested comment on whether we should require generators to keep basic information, such as the volume of solvent-contaminated wipes generated, where the wipes were sent, and how many shipments were sent off-site. We also requested comment on whether generators and handlers should certify that shipments sent and received met either the ''no free liquids'' or ''dry'' condition, as appropriate, and whether generators should certify that their employees are adequately trained to manage the solvent-contaminated wipes. Lastly, we requested comment on whether the accumulation time limits in 40 CFR 262.34 should be required. If so, then the generator would have to include a label stating the date accumulation started.

Comments: Recordkeeping

Many commenters urged EPA not to finalize any recordkeeping or reporting requirements. These commenters argued that these requirements would be duplicative of other regulations, for example, OSHA training requirements and 40 CFR 261.2(f). These commenters stated that additional recordkeeping, such as one-time notifications, certifications, or shipping records would place unnecessary burdens on generators and handling facilities, while providing little, if any, additional environmental benefit. Additionally, commenters stated that the goal of this regulation is to simplify requirements and exclude properly managed solvent-contaminated wipes from hazardous waste regulations; requiring additional recordkeeping thus runs counter to that goal.

Other commenters argued for recordkeeping requirements, including records of volumes of solvent-contaminated wipes generated, employee training certifications, records of shipments, a management plan for meeting the ''no free liquids'' condition, manifests, biennial reports, notifications, and certifications of meeting the ''no free liquids'' condition, as well as a log or notifications to the generator, state, or EPA when shipments

of solvent-contaminated wipes are received that contain free liquids. These commenters stated that recordkeeping requirements are essential to hold generators and handling facilities accountable under today's rule. The commenters argued that recordkeeping requirements would not be overly burdensome to generators and could easily be maintained as part of existing standard business records. Additionally, such recordkeeping would assist implementing agencies with ensuring that solvent-contaminated wipes are properly managed.

EPA Response: Recordkeeping

EPA agrees with commenters that support incorporating recordkeeping requirements into the final rule. In evaluating whether to require recordkeeping for the conditional exclusions for reusable wipes and disposable wipes, we balanced the need to enable proper implementation and compliance monitoring of the rule's conditions with the desire to avoid needless paperwork requirements that may be burdensome to generators and handling facilities, a concern raised by the commenters who argued against recordkeeping requirements. We also considered which recordkeeping requirements would be appropriate for these conditionally excluded materials.

After reviewing the comments, we chose to require generators to maintain records at their site that document (1) the name and address of the handling facility (*i.e.,* laundry, dry cleaner, landfill, or combustor); (2) that the 180-day accumulation time limit is being met; and (3) the description of the process the generator is using to ensure the solvent-contaminated wipes meet the ''no free liquids'' condition at the point of being sent for cleaning or disposal.

The purpose of requiring the name and address of the handling facility is to ensure that the solvent-contaminated wipes are being managed in compliance with the conditional exclusion (*e.g.,* for reusable wipes, that they are sent for cleaning and, for disposable wipes, that they are sent to an appropriate landfill or combustor). This information can be easily maintained by the generator using routine business records, such as contracts and invoices and, thus, should not pose significant burden on a facility.

Documenting the accumulation time limit is important to enable regulatory authorities to monitor compliance with the condition and to ensure that solvent-contaminated wipes are not stored indefinitely in lieu of sending the solvent-contaminated wipes to be cleaned or disposed. This condition is particularly important because the solvent-contaminated wipes can be accumulated with free liquids under the exclusion. Thus, there may be an incentive for a generator to store such wipes indefinitely in order to avoid the hazardous waste disposal costs associated with the free liquid spent solvent.

Requiring the description of the process the generator is using to ensure that the solvent-contaminated wipes contain no free liquids is critical for assisting implementation and compliance monitoring of this key condition of today's rule. Today's rule only extends to the solvent-contaminated wipe and the conditional exclusions do not include any free liquid spent solvent, which would continue to be subject to the hazardous waste regulations, as appropriate. It is therefore imperative that the condition of ''no free liquids'' be met. In order to ensure that this condition is properly implemented, it is appropriate to require documentation of the process, methodology, and/or knowledge that is being used to ensure the solvent-contaminated wipes managed under today's rule meet the ''no free liquids'' condition.

We disagree with commenters who wanted additional recordkeeping requirements, such as biennial reports or records on amounts of solvent-contaminated wipes generated. We do not find these records are necessary to ensure that solvent-contaminated wipes meet the conditions of today's rule. Records of shipments are also unnecessary as long as the generator documents the name and address of the laundry, dry cleaner, combustor, or landfill where the solvent-contaminated wipes are being sent. This documentation then would only have to be updated in the event the name or address of the destination facility changed. This serves to keep paperwork burden to a minimum.

Furthermore, we are convinced that requiring a log or notification to the generator, state or EPA region by a handler (*e.g.,* laundry) that receives solvent-contaminated wipes containing free liquids is not necessary. First, under today's rule, free liquid spent solvent must be managed according to the hazardous waste regulations, as appropriate. Thus, any liquid spent solvent that is discovered upon receipt, for example, by a laundry, must be managed as hazardous waste, if applicable. (Under today's rule, handlers are not allowed to send back shipments of free liquid waste to the generator as was proposed in November 2003. See section VIII.I below for more information.) This creates a strong incentive for generators to ensure that the solvent-contaminated wipes meet the ''no free liquids'' condition prior to sending the wipes to a handler because the generator is likely to incur a fee imposed by the handling facility for the hazardous waste disposal of the free liquid spent solvent wastes.

Additionally, in today's rule we have more clearly defined ''no free liquids'' using a performance standard based on the Paint Filter Liquids Test. This test provides a more objective definition than the November 2003 proposed definition, which specified only that no liquid solvent could drip from the wipe. Today's standard strengthens the ''no free liquids'' condition sufficiently so that solvent-contaminated wipes meeting the standard are not likely to produce free liquids in transit (as a result of compression, gravity, or percolation).

Secondly, if a handling facility did receive a shipment of solvent-contaminated wipes that contained free liquid spent solvent, the spent solvent would become subject to the reporting and recordkeeping requirements of the hazardous waste regulations as appropriate to the amount of hazardous waste generated in that month by the handling facility. EPA finds that any additional reporting requirements would be duplicative of what is already required under the hazardous waste regulations.

I. Handling Facilities

Laundries and Dry Cleaners

EPA proposed to conditionally exclude from the definition of solid waste solvent-contaminated reusable wipes that are sent to an industrial laundry or dry cleaner. Specifically, EPA proposed to require that these handling facilities manage the solvent-contaminated wipes in non-leaking, covered containers or in containers that are designed, constructed, and managed to minimize loss to the environment before the wipes enter the handling process. If free liquids accumulate in containers that arrive at a laundry or dry cleaner, EPA proposed that the handling facility either remove the free liquids and manage them as hazardous waste or return the closed container to the generator. Additionally, laundries and dry cleaners could dispose of the treatment residuals in solid waste landfills if they did not exhibit a hazardous waste characteristic.

Comments: Laundries and Dry Cleaners

Some commenters were concerned that contaminated solvents removed

from the solvent-contaminated wipes in laundering and discharged into waterways would adversely affect human health and the environment. Commenters believed that laundries and dry cleaners should be required to demonstrate that they are appropriately managing the solvent removed from the solvent-contaminated wipes during cleaning. At least one commenter stated that generators should only be allowed to send solvent-contaminated wipes to facilities that have been issued a valid NPDES or State Pollutant Discharge Elimination System permit, pursuant to section 402 of the CWA, or that have a pretreatment permit with a POTW, pursuant to section 307 of the CWA.

A few commenters believed that the conditions for management of solvent-contaminated wipes at laundries and other such handling facilities needed to be strengthened and that EPA should require more specific provisions for container management, storage time limitations, and notification requirements.

Some commenters argued against additional requirements on laundries and dry cleaners and other such handling facilities because the proposed conditions, in conjunction with existing regulatory programs, such as the effluent limitation guidelines for wastewater discharges from industrial laundries and applicable OSHA workplace exposure standards, already provide appropriate safeguards to protect the environment and human health. These commenters pointed out that solvent-contaminated wipes arriving at a laundry or dry cleaner already meet the standard of ''no free liquids.'' Commenters added that the solvents contaminating the wipes and removed during the laundering process are captured by laundry wastewater treatment systems designed to ensure compliance with applicable wastewater pretreatment permits. Comments stated that solvents not captured by an industrial laundry's wastewater treatment system are safely conveyed to a POTW where secondary biological treatment effectively destroys these organic compounds. Additionally, in response to EPA's request for comment on placing specific limits on the maximum amount of solvent on a wipe or a numerical limit on the number of shop towels laundries or dry cleaners can accept on an annual basis, most commenters asserted that limits on the amount or concentration of solvent are unnecessary because CWA/NPDES permits impose enforceable limits on point source discharges to waterways (from laundries and dry cleaners) through industrial user and pretreatment requirements.

EPA Response: Laundries and Dry Cleaners

We agree with those commenters that argued against additional requirements, beyond the management conditions included in today's rule, because, as the commenters argued, laundry and dry cleaner discharges are regulated under the CWA, which ensures that the solvents removed from solvent-contaminated wipes during the cleaning process are properly managed to avoid adverse affects on human health and the environment. EPA also agrees with commenters that placing specific limits on the maximum amount of solvent, or the concentration of solvent on a wipe, or a numerical limit on the number of shop towels laundries or dry cleaners can accept on an annual basis is unnecessary because the CWA already imposes enforceable limits on point source discharges to waterways through industrial user and pretreatment requirements. (See section VI.D.5 for more information.) Thus, to reduce confusion, we are clarifying in the regulatory language that we are allowing reusable wipes (that meet the conditions of today's rule) to be sent to laundries and dry cleaners whose discharges, if any, are regulated under the applicable provisions of the CWA.

Because we agree with commenters seeking strengthened management conditions, we are requiring in today's rule that handling facilities must accumulate, store, and manage reusable wipes in non-leaking, closed containers that are labeled ''Excluded Solvent-Contaminated Wipes'' when the wipes are not being processed or cleaned. Additionally, the container must also be able to contain free liquids should free liquids occur, for example, from percolation and compression of the wipes. (See section VI.D.1 for further discussion on this requirement.) However, we disagree that conditions, such as accumulation time limits for the laundry or further recordkeeping, are necessary. The business of a laundry or dry cleaner is to clean wipes in order to provide them to their customers in exchange for revenue. We do not see an incentive for a laundry or dry cleaner to overaccumulate solvent-contaminated wipes and thus, do not see a need to regulate to this end. As for recordkeeping, please see section VIII.H below for our response to comments regarding this issue. We also agree with commenters that compliance with applicable OSHA workplace exposure standards, in conjunction with today's requirement that solvent-contaminated wipes be managed in closed, non-leaking containers, provide appropriate safeguards to protect workers.

Landfills

In the Agency's November 2003 proposal, EPA proposed to allow solvent-contaminated wipes to be disposed in either a MSWLF or another non-hazardous waste landfill that meets the standards under 40 CFR part 257 subpart B.[33] In addition, EPA also proposed to make 11 solvents ineligible for the exclusion because these solvents are included in the TC or because they failed EPA's risk screening analysis for the November 2003 proposed rule. In EPA's October 2009 NODA, which requested comment on EPA's 2009 revised risk analysis for the solvent-contaminated wipes rulemaking, EPA requested comment on two additional approaches for managing disposable wipes. The first approach would allow the disposal of solvent-contaminated wipes that did not exceed target risk criteria for an unlined landfill, based on the Agency's risk analysis, to be disposed in landfills without a liner; solvent-contaminated wipes that did exceed target risk criteria for an unlined landfill could only be disposed in a lined landfill. The second approach would direct all excluded solvent-contaminated wipes, including those that could safely be disposed in an unlined landfill, be sent to a Subtitle D MSWLF subject to the requirements in 40 CFR 258.40(a)(2) and (b) (74 FR 55167–8).

Comments: Landfills

Some commenters supported EPA's first approach to allow solvent-contaminated wipes to be disposed in both types of landfills (lined and unlined) depending on the type of solvent used on the wipe and whether that solvent posed a risk, based on the Agency's 2009 revised risk analysis.

Other commenters supported the second approach to allow solvent-contaminated wipes to be disposed only in MSWLFs. These commenters argued that this approach would be easier to implement because it avoids the need for generators to separate wipes by solvent, particularly for wipes used in different parts of a facility, and then determine whether the solvent-

[33] The 40 CFR part 258 MSWLF regulations include design standards, groundwater monitoring, and other specific management standards. The 40 CFR part 257 Subpart B Non-Municipal Non-Hazardous Waste Disposal Unit regulations establish minimum federal criteria, such as location restrictions and groundwater monitoring, but do not require liners or other design and management standards (although states may require additional standards).

contaminated wipes could be sent to an unlined or lined landfill.

EPA Response: Landfills

EPA agrees with those commenters that supported a requirement that all solvent-contaminated wipes be sent only to MSWLFs operating under the 40 CFR part 258 standards.[34] This represents the most straightforward approach and imposes the least burden to implement and enforce. Under this approach, generators will not need to keep track of which excluded wipes are contaminated with which solvents and whether those solvent-contaminated wipes are being sent to a lined or an unlined landfill.

Although this approach may technically narrow the number of options for a generator from those in our proposal (because a generator will not be able to use a 40 CFR part 257 non-hazardous waste landfill), this will not constitute an undue restriction for the following reasons: (1) Generators are likely already using one or more of the 1,908 MSWLFs that operate under the 40 CFR part 258 standards for disposal of their other solid waste trash; [35] (2) a 40 CFR part 257 non-hazardous waste landfill may not accept solvent-contaminated wipes as these landfills are often set up for specific purposes, such as for large quantities of construction and demolition waste; and, (3) we do not have any indication that there is a significant cost advantage for using a 40 CFR part 257 non-hazardous waste landfill as compared to a 40 CFR part 258 MSWLF.

Any potential benefit gained from allowing the use of a non-hazardous waste landfill is likely to be insignificant, especially in light of the increased complexity for implementation and compliance monitoring that would be required to ensure that certain solvent-contaminated wipes were being sent to the appropriate landfill.

Combustors

EPA proposed that municipal and other non-hazardous waste combustors be allowed to burn solvent-contaminated wipes that meet the proposed conditions for the exclusion from the definition of hazardous waste. For solvent-contaminated wipes going to combustors, EPA proposed to require that these handling facilities manage the solvent-contaminated wipes in non-leaking, covered containers or in containers that are designed, constructed, and managed to minimize loss to the environment before the wipes enter the handling process. If free liquids accumulate in containers that arrive at a combustor, EPA proposed that the handling facility either remove the free liquids and manage them as hazardous waste or return the closed container to the generator. Additionally, combustors could dispose of the residuals in solid waste landfills if they did not exhibit a hazardous waste characteristic.

Comments: Combustors

Several commenters supported allowing combustion of solvent-contaminated wipes in a municipal waste combustor or other combustion facility. These commenters stated that EPA's 2003 risk screening analysis demonstrates that such combustion practices would be protective of human health and the environment when conducted in accordance with applicable permit conditions. Additionally, commenters stated that this management option would provide an environmentally beneficial recycling alternative to disposal and would allow facilities to use solvent-contaminated wipes as supplemental fuels in lieu of virgin fuels.

Some commenters raised the concern that some combustion units allowed in the November 2003 proposal would not address dioxin and furan formation and that combustors receiving large quantities of solvent-contaminated wipes containing halogenated solvents (listed F001 and F002 solvents) could become a significant source of dioxin emissions.

Additionally, at least one commenter argued that the proposed management conditions for combustors were not adequately protective of human health and the environment. This commenter argued that combustors routinely dump incoming waste into a large bin or concrete pit where it is then placed into the combustion unit via a clam shell, backhoe, or similar equipment. This commenter stated that the solvent-contaminated wipes could pose a risk to the environment, either through volatilization, release of free liquids, or potential fire. Commenters urged EPA to specify some minimum standards for management of solvent-contaminated wipes to be burned in combustors to address risk from fugitive emissions during the storage and processing of these wipes prior to and during combustion.

At least one commenter stated that EPA should allow the solvent-contaminated wipes to be used for energy recovery in cement kilns (which are generally regulated under hazardous waste regulations and thus, have been heretofore receiving disposable wipes).

EPA Response: Combustors

EPA agrees with commenters that support allowing combustion of solvent-contaminated wipes in municipal waste combustors and other combustion facilities. As explained in the November 2003 proposal, combustion facility owners/operators will be screening wipes contaminated with hazardous solvents that arrive at their facilities to ensure they do not violate local permit conditions. In addition, these combustors are easily capable of destroying the solvent, as described in section IV.F.11 of the Technical Background Document (68 FR 65602).

EPA does not agree with commenters that raised concerns that certain combustion units would not address dioxin and furan formation from combustors receiving large quantities of solvent-contaminated wipes containing halogenated solvents. As explained in the November 2003 proposal, EPA has promulgated revised air emission standard requirements under the New Source Performance Standards for municipal waste combustors and commercial and industrial solid waste incinerators (68 FR 65602). Thus, municipal waste combustors and other combustion facilities must comply with emission standards, including those that address dioxin and furan emissions. To reduce confusion, we have revised the regulatory language to be clear that we are allowing disposable wipes (that meet the conditions of today's rule) to be sent to municipal waste combustors and other combustion facilities that are regulated under the New Source Performance Standards in section 129 of the CAA.

EPA agrees with commenters' concern about the management of solvent-contaminated wipes prior to combustion. The provisions in today's rule will adequately address those commenters' concerns. Specifically, under today's rule, solvent-contaminated wipes must not contain free liquids when transported to a municipal waste combustor or other combustion facility. EPA has clarified this standard by defining ''no free liquids'' using the Paint Filter Liquids Test. The use of this test enables proper implementation of the ''no free liquids'' condition and, combined with today's requirement that generators document how they are meeting this condition,

[34] Solvent-contaminated wipes could also be sent to hazardous waste landfills operating under 40 CFR parts 264 and 265.

[35] *Municipal Solid Waste Generation, Recycling, and Disposal in the United States Tables and Figures for 2010,* November 2011 *http://www.epa.gov/wastes/nonhaz/municipal/pubs/msw_2010_data_tables.pdf.*

should minimize the possibility of free liquids occurring after the solvent-contaminated wipes leave the generator. If, however, free liquids do reach the combustor, they must be removed and managed under the applicable hazardous waste regulations.

Additionally, EPA is requiring that solvent-contaminated wipes be accumulated, stored, and transported in non-leaking, closed containers that are labeled as ''Excluded Solvent-Contaminated Wipes.'' This container standard will prevent release of the solvent to the air or through spills while being managed by the combustor.

EPA confirms that solvent-contaminated wipes may continue to be sent to RCRA hazardous waste combustors, boilers, and industrial furnaces (as well as hazardous waste landfills) regulated under 40 CFR parts 264, 265, or 266 subpart H, which includes cement kilns that are operating under these regulations. To further clarify this point, we have added these citations to the final regulatory language for this exclusion.

Comments: Free Liquids Received by Handling Facilities

Some commenters agreed with EPA's proposal to maintain the conditional exclusion for solvent-contaminated wipes that contain some free liquids when received by the handling facility. Commenters argued that free liquids may inadvertently make their way to the handling facility as a result of compression, gravity, or percolation effects on the wipes during transport or by improper management of the solvent-contaminated wipes by the generator prior to transport. These commenters agreed that the handling facility should be allowed to manage the liquids as hazardous waste or send the shipment back to the generator. At least one commenter stated that the handling facility should not be considered the generator of the solvents contained on the solvent-contaminated wipes and should not be responsible for removing the free liquids. Some commenters argued that EPA should allow handling facilities to recover the free liquid spent solvent through use of appropriate technology without classifying the liquid as hazardous waste.

Other commenters disagreed with EPA's proposed approach and argued that a handler who discovers free liquids should not be allowed to return the container with the solvent-contaminated wipes and free liquid to the generator. These commenters argued that containers with liquid hazardous waste should not be considered as having met the conditional exclusion and should only be transported by licensed hazardous waste transporters to permitted hazardous waste facilities. Additionally, commenters argued that allowing shipments to be returned to the generator may create problems in which the generator refuses to accept the returned solvent-contaminated wipes, or goes out of business after sending the wipes to the receiving facility.

In a similar vein, some commenters noted that generators have their own incentives to ensure there are no free liquids because generators could incur additional transportation (if the container is returned) or additional disposal costs (if the container and its contents are managed by the receiver as hazardous waste).

EPA Response: Free Liquids Received by Handling Facilities

EPA agrees with commenters that supported EPA's proposal to maintain the conditional exclusion for solvent-contaminated wipes that contain some free liquids when received by the handling facility. In the November 2003 proposal, EPA acknowledged that free liquids may be generated during transport to a handling facility, despite best efforts by the generator. Today's final rule further decreases the frequency of free liquids occurring during transport by defining the ''no free liquids'' condition for wipes using an objective test method and requiring generators to document their method for meeting this condition. Additionally, we agree with commenters who stated that generators have an economic incentive to ensure the solvent-contaminated wipes contain no free liquids.

However, if free liquids are observed in a container at the handling facility, EPA is requiring handlers to manage the free liquids according to all applicable hazardous waste regulations in 40 CFR parts 260 through 273. The wipes themselves may remain under the exclusion provided that the conditions of the exclusion were met (*e.g.,* the solvent-contaminated wipes and the container contained no free liquids at the point of transport by the generator). We do not agree with commenters that argue the handling facility should not be responsible for removing free liquids and that the containers with free liquids should be sent back to the generator. This approach would be inconsistent with the requirements for managing hazardous waste and increases the time the free liquids spend in transit, and the possibility of their release, since the generator would likely have to send them off-site again for their ultimate disposition. This approach supports those commenters who argued that containers with liquid hazardous waste should only be transported by licensed hazardous waste transporters to permitted hazardous waste facilities and should not be sent back to generators because these generators may refuse to accept the waste or may have gone out of business.

Laundries or dry cleaners may also recycle free liquid spent solvent within their allowed accumulation period (*e.g.,* 90 or 180 days) without a RCRA permit under the provisions of 40 CFR 261.6(c), which exempts the recycling process itself from certain hazardous waste requirements.

If the generator complies with the conditions of today's rule, free liquids during transport should be a very rare occurrence. Today's rule provides a strong incentive for generators to meet the ''no free liquids'' condition because handling facilities will likely expect them to bear the additional costs to manage the free liquids as hazardous waste.

J. Other Major Comments

EPA also sought comment on a few additional issues, including (1) co-contaminants; (2) intra- and inter-company transfers; (3) exotic solvents; and (4) state authorization.

Co-Contaminants

In the November 2003 proposal, EPA stated that the rule ''is not intended to override EPA's mixture and derived from rule regarding contaminants on industrial wipes other than the solvents specified in this proposal'' (see 68 FR 65602). Thus, if the solvent-contaminated wipes contain a listed waste other than the identified solvents, the wipes would remain listed hazardous waste and would not be eligible for the exclusion. EPA also proposed that solvent-contaminated wipes that exhibit a characteristic of hazardous waste other than ignitability due to co-contaminants (*i.e.,* any contaminant other than a solvent) would not be eligible for the conditional exclusions. However, EPA proposed that wipes co-contaminated with ignitable waste would remain eligible for the exclusions if they met the other conditions. EPA based this proposal on the fact that the solvent-contaminated wipes could be ignitable due to the nature of the solvents on them, and because the conditions would adequately address this risk.

Comments: Co-Contaminants

Some commenters encouraged EPA to allow the conditional exclusions to apply regardless of the presence of co-

contaminants, including the presence of other listed hazardous waste or characteristic waste. These comments claimed prohibiting solvent-contaminated wipes that contain co-contaminants will reduce or eliminate the eligibility of the majority of wipes from the exclusions.

Other commenters agreed with EPA's proposal not to allow solvent-contaminated wipes to be excluded if they were hazardous due to co-contaminants arising from other listed hazardous waste or exhibiting a hazardous waste characteristic. They argued that no assessment was made of the co-contaminants associated with the solvent-contaminated wipes, in particular metals, and EPA must ensure that other hazardous constituents do not result in adverse risk or environmental impact. These commenters also opposed allowing ignitable wipes to be eligible for the exclusions if the co-contaminant is an ignitable non-solvent constituent.

EPA Response: Co-Contaminants

EPA agrees with commenters that solvent-contaminated wipes that are hazardous due to the presence of co-contaminants that are other listed hazardous waste or that exhibit a hazardous waste characteristic (other than ignitability) should not be eligible for the conditional exclusions. Therefore, EPA is finalizing the provision regarding co-contaminants as proposed. That is, wipes contaminated with non-solvent listed waste (for example, as a result of a hazardous waste spill clean-up) or that exhibit a hazardous waste characteristic other than ignitability due to a non-solvent contaminant are not eligible for the conditional exclusions. EPA agrees with commenters that we did not evaluate the risks posed by solvent-contaminated wipes that are contaminated with other listed hazardous wastes and thus, it is not appropriate to exclude them in this rulemaking. Likewise, solvent-contaminated wipes that exhibit a characteristic due to constituents other than one of the excluded solvents (*e.g.*, co-contaminant metals) are not included in the conditional exclusions (with one exception for ignitable-only wastes) for similar reasons (*i.e.*, solvent-contaminated wipes contaminated with these other co-constituents were not evaluated).

We agree with commenters who sought to make solvent-contaminated wipes that are co-contaminated with ignitable-only wastes eligible for the conditional exclusion. Because solvents are often ignitable, as a practical matter it would be difficult to distinguish between those solvent-contaminated wipes that are ignitable due to the solvent from those that are ignitable due to a non-solvent co-contaminant. And such a distinction is unnecessary because the conditions of the exclusion (*e.g.*, no free liquids and closed, non-leaking containers) address the issue of ignitibility no matter what the source.

Intra- and Inter-Company Transfers

EPA proposed to allow intra-company transfers of solvent-contaminated wipes with free liquids, which would allow facilities to send their wipes to another facility within their same company that would remove sufficient solvent from the wipes so they could meet the ''dry'' condition or the ''no free liquids'' condition, as appropriate. The receiving facility would have to manage the extracted solvent according to the applicable hazardous waste regulations found under 40 CFR parts 260 through 273. We proposed this provision to encourage additional solvent recycling and energy recovery, as well as to assist facilities in meeting the ''no free liquids'' or ''dry'' condition.

The Agency also requested comment on allowing inter-company transfers of solvent-contaminated wipes with free liquids, which would allow generators to ship solvent-contaminated wipes with free liquids to any facility if the receiving facility uses a solvent extraction and/or recovery process to remove enough solvent from the wipes for them to meet the ''no free liquids'' condition.

Comments: Intra- and Inter-Company Transfers

Some commenters supported allowing intra-company transfers of solvent-contaminated wipes containing free liquids, if the receiving facility has a solvent-extraction and/or recovery process. These commenters argued that intra-company transfers would allow smaller facilities access to solvent extraction equipment or technologies at larger facilities, thus increasing solvent reuse while decreasing off-site disposal costs. At least one commenter, however, did not agree that allowing intra-company transfers would significantly increase solvent recycling because facilities are unlikely to invest in such extraction technologies.

Other commenters argued that intra- and inter-company transfers of solvent-contaminated wipes with free liquids should not be eligible for the exclusions. These commenters stated that excluding saturated solvent-contaminated wipes transported off-site for solvent reclamation runs counter to the premise that wipes contain no free liquids. They argued that it is not appropriate to allow free liquid spent solvent waste to be transported without RCRA controls, such as a manifest and other minimum protections. They further argued that allowing free liquid spent solvents to be transported freely to multiple sites creates an opportunity for further exposure and potential for environmental releases.

EPA Response: Intra- and Inter-Company Transfers

EPA has chosen not to finalize the provision allowing intra-company or inter-company transfers for solvent extraction. We agree with those commenters who argued that allowing off-site transport of saturated solvent-contaminated wipes runs counter to the premise of today's rule. Saturated solvent-contaminated wipes inherently present greater risk of environmental release than wipes containing no free liquids and the conditions of today's rule may not be adequate to address the risks posed by transport of solvent-contaminated wipes containing free liquids.

Although we acknowledge commenters' arguments that intra-company transfers may allow smaller facilities access to solvent extraction equipment and technologies and therefore increase solvent reuse, we note that, since this rule was proposed in November 2003, EPA has finalized 40 CFR 261.4(a)(23), which allows off-site transfers of hazardous secondary materials being reclaimed under the control of the generator, provided certain conditions are met. Therefore, generators of solvent-contaminated wipes that wish to transfer their wipes within the same company for the purposes of reclamation may use this exclusion, promulgated in October 2008 (73 FR 64668).

Exotic Solvents

In the November 2003 proposal, EPA stated that it had learned of new, ''exotic'' solvents on the market, such as terpenes and citric acids, that, while labeled as non-hazardous, could actually be flammable (68 FR 65600). Stakeholders had informed the Agency that, under certain conditions that have yet to be determined, the solvent-contaminated wipes that contain these exotic solvents may spontaneously combust. To prevent combustion, generators have wet down the wipes with water.

In the proposal, EPA requested information and comments on these exotic solvents and how they are presently managed. The Agency stated that some stakeholders have suggested that EPA should allow generating

facilities that are using one of these exotic solvents to wet down the wipes with water and thus, allow the off-site transport of these solvent-contaminated wipes with free liquids.

Comments: Exotic Solvents

A few commenters urged EPA to include special conditions for handling of such exotic solvents in the final rule, noting that wipes that contain certain vegetable-based oils could increase the possibility of spontaneous combustion during storage. These commenters recommended that EPA give special consideration to the use of water to mitigate potential spontaneous combustion due to these exotic solvents.

Another commenter argued that there is no need to address exotic solvents in the final regulation since the current hazardous waste regulations adequately cover such waste streams. The commenter added that while adding water to the wipes might reduce ignitability, it would also add waste volume and confuse the issue of free liquids.

Still another commenter disagreed with the term exotic solvents because the term suggests that such solvents are particularly dangerous, when, in fact, these solvents are almost always less potentially harmful to human health and the environment than the petroleum-based solvents they often replace. The commenter stated that these solvents typically exhibit a high flash point (>140 degrees F), are readily biodegradable, and have a low human and environmental toxicity than the more flammable petroleum-based solvents. This commenter stated that the most common concern with citrus-based solvents is their biodegradability, because, as the substance breaks down, heat is generated. This commenter also said that some citrus-based solvents biodegrade rapidly enough to generate significant quantities of heat and, if this heat is not allowed to dissipate, as with a closed container of solvent-contaminated wipes, the heat can raise the solvent to its flash point, thus causing spontaneous combustion.

This commenter argued that the safety considerations in preventing spontaneous fires have long been considered an acceptable practice. This commenter stated that often, wipes are wetted to the point where they would not pass a ''no free liquids'' test. This practice, the commenter stated, however, does not violate current state policies nor would it violate the Agency's proposed solvent-contaminated wipes rule because citrus-based solvents are not RCRA regulated hazardous waste. As long as citrus-based solvents are not commingled with other RCRA regulated solvents, the commenter argued that the wetting of wipes containing citrus-based solvents to the point at which the wipes contain free liquids is not of regulatory concern.

EPA Response: Exotic Solvents

EPA agrees with commenters that stated wipes contaminated with exotic solvents that do not exhibit a hazardous waste characteristic and which are not listed hazardous wastes are not subject to RCRA hazardous waste regulation and are thus, outside the scope of today's rulemaking. In some cases, however, although the solvent may not exhibit a hazardous characteristic based on its flash point, a wipe contaminated with that solvent may be hazardous because it can oxidize and spontaneously combust. EPA did not intend to imply in the November 2003 proposal that wipes contaminated with these solvents would not be ignitable under RCRA. EPA considers wastes that can spontaneously combust at any point in their management as potentially meeting the definition of ignitibility under 40 CFR 261.21(a)(2). Generators are responsible for making a hazardous waste determination as is required for any wastestream.

We recognize that generators and handlers may sometimes wet down wipes contaminated with exotic solvents to prevent spontaneous fires from occurring. Although wetting these wipes may be appropriate for managing the on-site risk of spontaneous combustion, we do not agree that these wipes should be allowed special consideration under today's exclusions. If wipes contaminated with solvents must be wetted to the point where they would not pass a ''no free liquids'' test at the point of transport for cleaning or disposal, then EPA believes they should not be eligible for today's exclusions. This approach is consistent with wipes containing F-listed solvents that would not pass the ''no free liquids'' test at the point of transport from the generator to the handling facility in order to minimize release of solvents to the environment. While EPA supports generators' choices to use less toxic solvents, we encourage generators to work with their suppliers to understand and become aware of any potential hazards that could arise from using solvents in conjunction with wipes, and to appropriately classify and manage them.

Comments: State Authorization

Some commenters argued that EPA should require the rule be implemented in all 50 states to ensure national consistency of the regulations regarding solvent-contaminated wipes. At least one commenter noted that, because this regulation is not specifically authorized under the Hazardous and Solid Waste Amendments of 1984 (HSWA), it will not be effective automatically in all states and thus, EPA should conduct comprehensive outreach with the states to adopt the proposed conditional exclusions when they are finalized.

Other commenters argued that EPA's final rule should allow states to adopt the federal rule with modifications and should allow states to adopt equally protective provisions, which will enable consistency with the states' current policies, many of which have been in effect since 1994. Additionally, these commenters urged EPA to be cognizant of the fact that many states have had over a decade of experience in establishing cost-effective, practical, and protective regulatory programs for solvent-contaminated wipes. The commenters argued that EPA should be cautious to avoid interfering with pre-existing and equally-protective state programs that already are in place for the management of solvent-contaminated wipes.

Another commenter argued that, with respect to the rule's reusable wipes provision, EPA has not made clear whether it considers the exclusion to be an ''exit'' mechanism from otherwise applicable hazardous waste regulatory requirements or, in light of EPA's pre-existing decision to allow states to determine their own regulatory status of reusable wipes, a first-time hazardous waste ''entry'' mechanism for listed solvent-containing laundered wipes. This commenter argued, if the former is the case, EPA should clarify that as a matter of federal law, the full set of RCRA-authorized state hazardous waste regulations should be immediately applicable to reusable wipes unless and until the provisions of the final rule for reusable wipes are implemented lawfully by authorized states. If the latter is the case, then consistent with EPA's prior determinations regarding the status of hazardous waste listings involving solvent ''mixtures'' under the HSWA amendments, the commenters argued those provisions of the final rule must be classified as a ''HSWA rule'' that is immediately effective in all respects in all states. In either case, in order to comply with its own RCRA state authorization regulations and guidance, the commenters stated that EPA needs to clarify that states whose current policies governing reusable wipes are less stringent in any respect than the new federal conditional exclusion must amend their RCRA-

authorized hazardous waste regulations as necessary to ensure that all the conditions of the final exclusion for reusable wipes are provided for in duly promulgated regulations of those states.

EPA Response: State Authorization

EPA does not agree that we should require the rule be implemented in all 50 states. Under RCRA section 3006, EPA may authorize qualified states to administer the RCRA Subtitle C hazardous waste program within the state. Following authorization, the authorized state program operates in lieu of the federal regulations. Authorized states are required to modify their programs only when EPA promulgates federal requirements that are more stringent or broader in scope than existing federal requirements. RCRA section 3009 allows states to impose standards more stringent than those in the federal program (see 40 CFR 271.1). Therefore, authorized states may, but are not required to, adopt federal regulations, both HSWA and non-HSWA, that are considered less stringent than previous federal regulations. See section X for more information on state authorization under RCRA. Because today's rule finalizes conditional exclusions from the definition of solid and hazardous waste, it is less stringent than previous federal regulations and thus, EPA cannot mandate that the rule become effective in all 50 states. However, we encourage states to adopt today's exclusions to reduce regulatory burden and maximize national consistency of regulations regarding solvent-contaminated wipes.

EPA agrees with commenters that states may adopt the federal rule with modifications provided their state programs are at least as stringent as the federal program per the provisions of 40 CFR 271.21(e). This allows some consistency with the states' current policies, which have been in effect for many years. For example, we specifically allow authorized states to specify a different standard or test method for determining that solvent-contaminated wipes contain no free liquids. Where an authorized state standard exists, generators must meet that standard in lieu of the Paint Filter Liquids test for purposes of meeting the ''no free liquids'' condition. Of course, the authorized state standard must be no less stringent than today's definition of ''no free liquids.''

EPA does not agree that today's rule establishes for the first time that solvent-contaminated wipes are solid and hazardous wastes. In fact, the 1994 Shapiro memo plainly describes that a ''wiper can only be defined as listed hazardous waste if the wiper either contains listed waste, or is otherwise mixed with hazardous waste. Whether or not a used wiper contains listed hazardous waste, is mixed with listed hazardous waste, only exhibits a characteristic of hazardous waste, or is not a waste at all, is dependent on site-specific factor(s); this is not a new policy.'' [36] Clearly, EPA has always considered solvent-contaminated wipes subject to solid and hazardous waste determinations. Therefore, today's rule conditionally excluding solvent-contaminated wipes is promulgated under the authority of sections 2002, 3001–3010 and 7004 of the Solid Waste Disposal Act of 1965 and is not a HSWA rule.

In response to the argument that reusable wipes must be managed as hazardous wastes unless and until the state adopts the conditional exclusion, we note that, as stated in the November 2003 proposal, the 1994 Shapiro memo established federal policy with regard to solvent-contaminated wipes that deferred the determination of their regulatory status in case-specific scenarios to the states and EPA Regions (68 FR 65617). This deferral has resulted in the development of various state programs for reusable wipes. Therefore, authorized states whose programs include less stringent requirements than today's final rule are required to modify their programs to maintain consistency with the federal program per the provisions of 40 CFR 271.21(e). In addition, any states that delineate their program for reusable wipes in guidance documents or interpretive letters will need to promulgate enforceable regulations, as required by 40 CFR 271.21(a). Because today's rule is a non-HSWA rule, the current state requirements remain in place until the state adopts requirements equivalent to these federal requirements.

IX. Major Comments on Risk Analysis

The Agency received comments on both the risk screening analysis from the November 2003 proposal and on the revised risk analysis presented in the October 2009 NODA. Many of the comments and criticisms of the original analysis from November 2003 were addressed by the revisions to the risk analysis undertaken and published for comment in the October 2009 NODA. In the following responses, we will first address the comments on the landfill loading calculations (*i.e.,* how much of the solvents and sludges might be disposed in landfills under an exclusion) in the 2003 risk screening analysis for the November 2003 proposal and in the 2009 revised risk analysis for the October 2009 NODA. We will then respond to the comments on how the Agency calculated the risk-based mass loading limits for the solvents and the sludges in the 2003 risk screening analysis for the November 2003 proposal and in the 2009 revised risk analysis for the October 2009 NODA.

Comments: November 2003 Solvent Loading Calculations

The Agency received many public comments in response to EPA's November 2003 proposed rule regarding the approach and assumptions used in estimating the quantity of solvent which might be disposed in a landfill, known as landfill loading. Most of these comments were related to how the Agency chose the various values used as inputs to the calculations. Some commenters criticized the use of ''high-end assumptions'' for key input data, while other commenters suggested we underestimated these input data. For disposable wipes, the input data questioned included the following: number of generators, quantity of solvent on a wipe, the percent of wipes in a sector containing the solvents, and number of generators using a single landfill for disposal. For reusable wipes, the key input data at issue included quantity and distribution of wipes washed at each laundry, concentrations of solvents in washwater, partitioning of solvents to the sludge, and number of laundries using a single landfill for sludge disposal.

EPA Response: November 2003 Solvent Loading Calculations

In response to these comments, we completely revised the landfill loading calculations and presented our new analysis in the October 2009 NODA (see the document entitled ''Landfill Loadings Calculations for Disposed Solvent-Contaminated Wipes and Laundry Sludge Managed in Municipal Landfills,'' October 2008; this is referred to below as the ''Landfill Loadings Report''). The Landfill Loadings Report, and the associated appendices, includes improvements in referencing and describing the assumptions used for the above input data, such as the amount of solvent on each wipe, the fraction of wipes containing the listed solvent, and the number of wipes used per facility. To account for the variability in these parameters (*e.g.,* facilities using

[36] See ''Industrial Wipers and Shop Towels under the Hazardous Waste Regulations,'' Michael Shapiro, February 14, 1994. This memo can be found in RCRA Online, Number 11813 and in the docket for today's rule.

different quantities of solvent), we used a probabilistic analysis, such that the calculation inputs account for the full range of data available. Therefore, we did not use ''high-end'' parameters in our analysis, except as part of a range which also includes less conservative values. The probabilistic approach used in the revised landfill loading analysis addresses the potential to overestimate or underestimate the input data used in the solvent loading calculations. The Landfill Loadings Report also includes an analysis of uncertainty and sensitivity, which were evaluated using a probabilistic analysis. Therefore, we believe that this analysis presented in the October 2009 NODA addresses the comments received on the landfill loading calculations presented in the November 2003 proposal.

Comments: 2009 Revised Risk Analysis Solvent Loading Calculations

As described earlier in the background section of this notice, we undertook an external peer review of the 2009 revised risk analysis and addressed those comments prior to presenting the new risk analysis in the October 2009 NODA. Commenters generally supported our conclusion that 10 of the 30 solvents have no use, or very limited use, as solvents on wipes. However, some commenters stated that EPA used limited data sets, resulting in over-conservative mass loading levels for the disposable wipes. One commenter indicated that extreme solvent loading values are inconsistent with the implicit assumption that the solvent-contaminated wipes meet the conditions of the exclusion (*e.g.,* no free liquids). The commenter stated that establishing an ''upper bound'' for the amount of solvent on each wipe would more accurately account for the ''no free liquids'' condition.

Another commenter provided comments specific to the analysis for solvent loadings for reusable wipes. This commenter provided updated information collected in surveys for various input parameters related to the sludge generated by facilities that laundered reusable wipes (*e.g.,* the quantity of wastewater generated and the quantity of towels being processed).

EPA Response: 2009 Revised Risk Analysis Solvent Loading Calculations

In response to comments on over-conservative mass loading levels for disposable wipes, we note that the report typically used distributions that resulted in the best fit of the available data. While setting an upper bound for the amount of solvent on a wipe is one approach to account for the ''no free liquids'' condition, selecting a precise value for this upper bound is difficult. The initial sensitivity analysis presented in the report (*i.e.,* section 2.4.2 of the Landfill Loadings Report) suggests that the amount of solvent on the solvent-contaminated wipes is not a particularly sensitive input parameter, so modifications in this parameter are not expected to affect the results significantly. To fully respond to the comment, we conducted further sensitivity analyses by truncating this parameter at a lower value (to be more consistent with observed data) and confirmed that this change would lower the landfill loading estimates by less than 10%. Therefore, we find that the slightly more conservative approach used in conducting the analysis is reasonable.

Regarding the information provided by one commenter for reusable wipes, we decided to modify our analysis to incorporate the more recent data, where appropriate. We made a case-by-case evaluation of the data provided by the commenter, and modified the calculations accordingly. Using the updated data on the pounds of towels processed per year and the resulting washwater used lowered the mass loadings calculated for sludges generated by the laundries by about 50%. These changes had little effect on the overall risks presented by the combined disposal of disposable wipes and laundry sludges, because the sludges represented a relatively small fraction of the combined risk for the solvents. However, the effect of these modifications was sufficient to reduce the combined risk results presented in the October 2009 NODA for tetrachloroethylene in a composite-lined landfill, such that this chemical would meet the target risk criteria (a cancer risk of 1.0 x 10^{-5}, based on the 90th percentile estimated landfill loading and the 90th percentile risk-based mass loading limit). As noted in the background section of this notice, the Agency has since issued a new human health assessment for tetrachloroethylene, which included updated health-based values. When we substituted the new health-based values for tetrachloroethylene in our final risk evaluation (see the Addendum in the docket for this rulemaking), the combined risks for this chemical in a composite-lined unit dropped even further, such that the risks were well below the target risk criteria, with or without the modifications to the sludge data based on the commenter's new data.

Responses to all comments on the landfill loading estimate used in the November 2003 proposal and the October 2009 NODA are provided in the docket.[37] The docket also contains the final landfill loadings report (''Landfill Loadings Calculations For Solvent-Contaminated Wipes,'' January 2012), which reflects the modifications made in response to the public comments and external peer reviewer comments on the risk analysis.

Comments: Other Aspects of 2003 Risk Screening Analysis for November 2003 Proposal

EPA received many comments on other aspects of the 2003 risk screening analysis used to support the November 2003 proposal. Most of these comments were addressed in the 2009 revised risk analysis in the October 2009 NODA. Several commenters expressed concern that the 2003 risk screening analysis was overly conservative. Concerns expressed included the following: use of a simple deterministic approach based on high end or average input values; landfill assumptions did not consider liners or chemical degradation mechanisms; use of the highest leachate concentrations; use of fixed distance to receptors, as well as others.

Other commenters expressed concerns that the 2003 risk screening analysis underestimated risk.[38] Other comments questioned our exposure assumptions, our use of generic Dilution and Attenuation Factors (DAFs) to estimate exposure point concentrations, and our lack of response to the peer reviewer comments. We also received comments that the 2003 risk screening analysis failed to consider other important indirect exposure pathways for humans and the environment (*e.g.,* runoff and erosion, particulate emissions, and possible food chain risks).

Commenters also stated that the 2003 risk screening analysis only considered a single solvent constituent from a single source going to a single landfill, and that EPA assumed that the landfill receives wipes from no other sources. Commenters noted that the target risk criteria used were inadequate to allow margins for other contaminants migrating from the landfill.

[37] See the docket for ''Response to Comments on the 2003 Proposal on the Landfill Loadings Calculations for Solvent-Contaminated Wipes,'' and ''Response to Comments on the 2009 NODA on the Landfill Loadings Calculations for Solvent-Contaminated Wipes,'' and ''EPA's Response to Peer Reviewer Comments on the Landfill Loadings Calculations for Solvent-Contaminated Wipes.''

[38] Many of these comments concerned our assumptions for the amount of solvent contained on the wipes; the new Landfill Loadings Report presented in the October 2009 NODA addressed these comments, as described previously.

EPA Response: Other Aspects of 2003 Risk Screening Analysis for November 2003 Proposal

In response to comments on the 2003 risk screening analysis for the November 2003 proposal, the Agency undertook a more robust risk analysis. This 2009 revised risk analysis, which was presented in the October 2009 NODA, was probabilistic in nature and used Monte Carlo methods to characterize the variability and uncertainty associated with the modeling. The 2009 revised risk analysis results included solvent-specific, risk-based mass loading limit (RB–MLL) estimates for both unlined and composite-lined landfill scenarios. In addition, the Agency developed and used a new landfill coupled reactor model (LFCR), which allowed the modeling to account for solvent biodegradation and partitioning between air, water, and solid phases while in the landfill. The LFCR model was run to develop distributions of estimates of landfill leachates, which were used as input to EPA's Composite Model for Leachate Migration with Transformation Products (CMTP) groundwater model. The time-averaged solvent concentrations were used as input to the downstream exposure model.

The probabilistic approach used in the 2009 revised risk analysis addresses the potential to either overestimate or underestimate the risks from disposal of solvent-contaminated wipes and sludges in landfills. For example, the 2009 revised risk analysis presented in the October 2009 NODA addresses the exposure assumption comments primarily through the use of data distributions for exposure factors, which were developed based on EPA's guidance (*e.g.,* the EPA Exposure Factors Handbook). Regarding the use of generic DAFs, the 2009 revised risk analysis did not use generic DAFs, but rather reflected solvent-specific modeling with a probabilistic analysis, which included national-level modeling using EPA's CMTP groundwater model. As noted in the background section of this notice, we submitted the 2009 revised risk analysis for extensive peer review and responded to the comments, as appropriate. Our full response to the peer reviewer comments on the 2009 revised risk analysis is in the docket for today's final rule.

In the 2009 revised risk analysis, we also reevaluated the potential for risk via indirect exposure pathways, as well as the potential for significant impacts on the environment. We developed the RB–MLLs for the exposure pathways that pose the greatest potential concern. We considered the physical and chemical properties of the chemicals of interest and focused our evaluation primarily on direct exposure pathways. The 20 solvents evaluated include a range of volatile and semi-volatile organic chemicals, most of which have relatively short environmental half-lives (as compared to persistent organic chemicals). The primary release mechanisms from landfills are diffusion and advection into the air and leaching to groundwater. The generally low values for partition coefficients for these solvents strongly suggest that indirect exposure pathways will either be incomplete or contribute negligibly to total exposure. The conclusion that these solvents are insignificant contributors to risk via indirect exposure pathways (for a landfill source) is consistent with other risk analyses of landfill waste management scenarios undertaken by the Agency.[39] Furthermore, landfills maintain controls for particulate air releases and for soil erosion and runoff; regulations for MSWLFs include run-on/runoff controls (40 CFR 258.26), daily cover (§ 258.21), and compliance with the CAA requirements (§ 258.24). Thus, the primary focus of the risk modeling was to assess direct exposure pathways to the air and groundwater. The commenters did not provide any information to suggest that these indirect exposure pathways would alter the RB–MLLs.

Regarding multiple facilities using the same landfill, the 2009 risk analysis presented in the October 2009 NODA evaluated multiple facilities disposing of solvent-contaminated wipes in one landfill. We used a Monte Carlo analysis to represent the variability of generator and landfill locations; the distribution used ranged from 2 to 67 generators per landfill. In addition, the overall loadings assumed were conservative estimates, as described in the Landfill Loadings Report.

EPA disagrees with suggestions by a commenter that EPA should use more restrictive target risk criteria to address other possible sources of the solvents of concern. The Agency believes that the risk criteria used (1E–5 cancer risk and HQ less than or equal to 1.0 for non-cancer risk) are appropriate for a listing decision, especially in light of the conservative approach used in the overall risk evaluation. Furthermore, we point out that the 2012 final risk analysis indicates that the risks for the solvent-contaminated wipes in composite-lined landfills were well below the target risk criteria for all of the solvents (except for trichloroethylene, which is not eligible for the exclusion for disposable wipes), *i.e.,* the solvent landfill loadings are more than a factor of ten below the risk-based mass loading limits.[40] Therefore, even if the Agency used lower target risk criteria, as suggested by the commenter, the disposal of solvent-contaminated wipes and sludge in composite-lined landfills would not present a significant risk for the solvent chemicals included in the exclusion.

Comments: Assumptions for Reusable Wipes

Commenters on the 2003 risk screening analysis for the November 2003 proposal stated that EPA did not consider exposures resulting from solvent-contaminated wipes and laundering processes, other than to evaluate the sludge and solvent-contaminated wipes disposed in a MSWLF. Other possible exposure pathways noted were worker exposure at the laundering facility; the release of constituents not treated at the POTW; and air emissions from laundries affecting nearby residences.

Some commenters also noted that EPA neglected to consider contamination of wipes from the materials that the solvent removes from the equipment. Information submitted by one commenter indicated that even after processing by a professional laundering service, cloth shop towels may contain levels of chemicals (metals) that are potentially harmful to workers using the wipes. However, another commenter dismissed this point, stating that claims about residual metals in clean, laundered shop towels are entirely without merit.

EPA Response: Assumptions for Reusable Wipes

The purpose of the 2003 risk screening analysis for the November 2003 proposed rule and the 2009 revised risk analysis presented in the October 2009 NODA was to characterize the potential risk from the disposal of solvent-contaminated wipes and laundry sludge in landfills. Therefore, occupational exposures, such as exposures resulting from the partitioning of solvents to air and wastewater during laundering and dry cleaning operations, were not

[39] For example, see EPA's evaluation of potential risks from landfill disposal for paint production wastes as described in the proposed rule; 66 FR 10060, February 13, 2001.

[40] See Table 5 in ''F001–F005 Solvent-Contaminated Wipes and Laundry Sludge: Comparison of Landfill Loading Calculations and Risk-Based Mass Loading Limits,'' revised, April 2012, in the docket for the final rule.

considered. Our analyses assumed that workers are appropriately protected by regulation and guidance provided by OSHA.[41]

Concerning exposure to residents living in close proximity to laundering/dry cleaning facilities, given the range of exposures captured by the modeling scenarios in the 2009 revised risk analysis presented in the October 2009 NODA, and the fact that ambient air exposures were not significant, any ambient air impacts from laundering/dry cleaning operations should be less significant than those considered under our landfill disposal scenario. The 2009 revised risk analysis assumed that ambient air exposure could occur as close as 25 meters from the landfill, a fairly conservative assumption. Despite this, none of the 90th percentile RB–MLLs were based on ambient air exposures. Indoor air exposures resulting from showering with contaminated groundwater and groundwater ingestion were found to be the key exposures considered, and these risks drove the analysis. With regard to partitioning of solvents to wastewater, any risks associated with these discharges would be addressed by the CWA, under NPDES permits or local POTW pretreatment standards, if necessary.

In response to the possibility of co-contaminants, we first note that solvent-contaminated wipes that exhibit a characteristic (except for ignitability) due to constituents other than one of the excluded F- and corresponding P- and U-listed solvents (*e.g.,* co-contaminant metals) are not eligible for the conditional exclusions. Similarly, wipes contaminated with other listed hazardous wastes would not be eligible for the conditional exclusions. Regarding other possible contaminants, we note that the F-, P-, and U-code solvent listings are based on the toxicity and/or ignitability hazards presented by the specific solvents included in the listing descriptions. The language in the listings illustrates EPA's concern with the solvent chemicals. Other potential constituents in the solvent wastes vary widely across industries, such that it would be exceedingly difficult, if not impossible, to categorize and evaluate risks associated with these wastes if we considered all other hazardous constituents and characteristics. Because of the wide variability in constituents that might be present in wastes from use of the solvents and the identified hazards posed by the solvents, we focused our evaluation on the solvent chemicals themselves. We find that this is the most practical approach to evaluating risks posed by solvent-contaminated wipes.

Regarding the potential for laundered towels to contain residual metals, we note that the study cited by the commenter was limited to metal contaminants, not listed solvents. As described in the above paragraph, EPA did not attempt to evaluate possible co-contaminants on the wipes. The exclusion is for wipes contaminated with F-listed solvents, not metal-contaminated wipes. The solvent-contaminated wipes are still subject to the TC for metals, which would help to address any potential metal residuals in the laundered wipes. In addition, any residual metals still on the towels after laundering would likely be tightly bound to the fibers, making any transfer from laundered towels to workers unlikely.

Comments: Other Aspects of the 2009 Revised Risk Analysis Presented in the October 2009 NODA

Commenters were generally supportive of the 2009 revised risk analysis presented in the October 2009 NODA. However, we received comments on some aspects of the analysis. Many of the comments submitted were related to the way EPA calculated the estimated landfill loading rates (ELLRs) for solvents disposed in landfills; we addressed these comments as described previously (see comments on the revised solvent loading calculations above). Comments on other aspects of the 2009 revised risk analysis are described below.

One commenter stated that EPA should use data for laundry sludge measured using a leaching test in its risk analysis (*i.e.,* the TCLP). The commenter also argued that EPA was overly-conservative in not considering the likelihood that the monitoring of groundwater wells near the landfill would limit exposure and in the assumptions EPA used for well locations near landfills. In addition, the commenter provided results of a survey that indicated a ''majority'' of laundry facilities send their sludges to lined landfills, arguing that this reflected the general trend over the past 20 years away from unlined landfills.

Another commenter generally concluded that EPA's 2009 revised risk analysis is ''scientifically defensible.'' The commenter suggested that the use of lined Subtitle D landfills for disposal of solvent-contaminated wipes and laundry sludge ''would be permissible, but not required, to adequately protect human health and the environment.'' However, the commenter indicated that a number of input assumptions used in EPA's 2009 revised risk analysis are unnecessarily conservative, resulting in significant over-estimation of the risks posed. In particular, the commenter stated that EPA used population distribution assumptions to calculate exposure concentrations for both the groundwater and air pathways that assumed higher population percentages located closer to a landfill than actually occurs. The commenter also states that, because exposure concentration is a function of distance from the source, using the EPA distributions result in an overestimation of calculated risk.

The commenter also stated that our modeling underestimated the effect of biodegradation, noting that this could lower the peak contaminant concentration to which individuals would be exposed. Finally, the commenter criticized the Agency's approach in comparing the ELLRs to the RB–MLLs for the various solvents, which used a comparison of two upper bound values (*i.e.,* the 90th percentile ELLR and 90th percentile RB–MLL). The commenter stated that this results in a level of protectiveness that exceeds EPA's stated goal of ensuring that 90 percent of the hypothetical individuals living near a landfill will not be exposed to solvent releases at levels of concern. As an alternative, the commenter suggested the use of ratios that combine the 90th percentile RB–MLLs and the 50th percentile ELLRs.

EPA Response: Other Aspects of the 2009 Revised Risk Analysis Presented in the October 2009 NODA

EPA disagrees with the comments regarding the use of TCLP data from laundry sludge and finds that using the new landfill model (LFCR) rather than TCLP leachate data for modeling solvent releases from disposed solvent-contaminated wipes and sludge presented several advantages. The landfill model we used captured a broad variety of conditions needed to back-calculate acceptable levels of solvent loadings for a national rule. Our approach allowed calculation of releases to all media, including air. Using this approach, we were able to consider the potential risk for a range of chemicals based on their properties and transport characteristics, regardless of whether empirical release data, such as TCLP, were available. Furthermore, the TCLP data submitted by the commenter were severely limited (*e.g.,* the submitted samples were taken in the 1990s, some samples were not analyzed for the organic constituents of interest, and

[41] For example, worker exposures to airborne contaminants are limited based on 29 CFR 1910.1000 Tables Z–1 and Z–2.

there was no supporting QA/QC data provided).

EPA disagrees that the groundwater modeling scenario we used was based on overly conservative assumptions. This reasonable groundwater exposure scenario, developed to be protective of highly exposed individuals, has been implemented to support various EPA risk analyses, which have withstood extensive external peer reviews. EPA also disagrees with the commenter's assumption that, in an unlined landfill scenario, comprehensive monitoring is being done to assess potential impacts to groundwater, and that such monitoring would prevent potential risk. While monitoring is required for many landfills, there are exceptions to this requirement (*e.g.,* for smaller landfills, as defined in § 258.1(f)(1)). In any case, protectiveness should not rely on groundwater monitoring to protect nearby residents from potential exposures. Rather, our risk analysis seeks to estimate risks to highly exposed individuals that rely on groundwater sources near landfills. If we rely on well monitoring, then groundwater releases might not be detected until aquifers have been contaminated. That approach would be inconsistent with the preventive intent of RCRA to prospectively avoid releases into the environment that may threaten human health and the environment. Therefore, relying on monitoring is not appropriate in our risk analysis.

With respect to the issue of landfill and well locations, we note that these locations can change over time. Therefore, EPA used probabilistic analyses to incorporate the variability and uncertainty in the data. Landfill locations for this risk analysis were based on the locations found in EPA's landfill database. We implicitly assumed that off-site landfills provide a reasonable representation of the distribution of MSWLFs across the United States. From this database, we obtained a sample population of locations and correlated parameters (*e.g.,* aquifer type, climate center, soil types, and aquifer temperature) necessary to run the source and fate and transport models. The commenter's claim that their survey shows that the ''majority'' of laundry facilities dispose of their sludge in a lined landfill is not sufficient to demonstrate that there are no potential risks from disposal in unlined units. Nonetheless, we modeled both an unlined and composite-lined landfill scenario to assess the full range of potential risks. The Agency found that disposal in composite-lined landfills was a necessary condition for the exclusion to adequately protect human health and the environment.

With respect to population distributions, we acknowledge that the 2009 revised risk analysis used conservative receptor locations. However, our analysis does not directly consider population risk; rather this national-level risk analysis was designed to be protective of highly exposed individuals. Regarding the groundwater pathway, we used a probabilistic approach for well placement that was based on residential well locations taken from surveys of MSWLFs. Similarly for the air risk evaluation, the specific distances to receptors were selected to ensure complete coverage in the air estimates, particularly near the source of the emissions where the greatest impact can be observed; this analysis was conducted using a conceptual site model that is plausible anywhere in the contiguous 48 states.

This approach for receptor location is reasonable for this national-level analysis. In a supplemental report, one commenter provided an alternative assessment that evaluated the well distances with respect to population density surrounding twelve landfills in four states. However, the commenter's density analysis and the referenced state regulations are only snapshots of a limited number of existing landfill scenarios and are not sufficiently representative of potential exposures to releases from other landfill scenarios throughout the nation. Landfills are subject to various state requirements (*e.g.,* different buffer zones), and twelve landfills in four states are clearly less representative than the data used by EPA for the nation as a whole.

EPA disagrees with the commenter who stated that our modeling underestimated the effect of biodegradation. The landfill model we used incorporated biodegradation of the solvents in the landfill using the available biodegradation data. We also modeled some degradation in groundwater (*i.e.,* hydrolysis). Some types of transformation processes in groundwater, such as biodegradation, are more site specific and can be highly variable. This would be much more difficult to simulate in groundwater using a generic model such as the EPA CMTP, especially without extensive biodegradation data on subsurface aquifer conditions nationwide, which the commenter did not provide. Thus, for this national-level analysis, we conservatively assumed that these processes do not occur, and biodegradation was not included in the subsurface environment beyond the landfill.

Regarding our comparison of the 90th percentile values of the ELLRs and RM–MLLs, our analysis was designed to be protective of 90 percent of hypothetically exposed individuals across all of the landfill sites in the United States. This is consistent with EPA guidance, which states that ''For the Agency's purposes, high end risk descriptors are plausible estimates of the individual risk for those persons at the upper end of the risk distribution,'' or conceptually, individuals with ''exposure above about the 90th percentile of the population distribution.'' [42] While the applied approach is conservative, comparing the 90th percentiles is appropriate for achieving this goal. The ELLRs at selected percentiles are analogous to the RB–MLLs in that they represent a best estimate of the actual value at each percentile. We disagree with the comparison suggested by the commenter (*i.e.,* comparing the central tendency ELLR to the 90th percentile RB–MLL) because it would not be protective of 90 percent of hypothetically exposed individuals. Comparing the respective 90th percentiles is appropriately and reasonably conservative, given the considerable uncertainty associated with the loading limits.

Responses to all comments on the calculation of the RB–MLLs used in the November 2003 proposal and the 2009 revised risk analysis presented in the October 2009 NODA are provided in the docket.[43]

X. How will these regulatory changes be administered and enforced?

A. Applicability of Rules in Authorized States

Under RCRA section 3006, EPA may authorize qualified states to administer the RCRA Subtitle C hazardous waste program within the state. Following authorization, the authorized state program operates in lieu of the federal regulations. EPA retains enforcement authority to enforce the authorized state Subtitle C program, although authorized states have primary enforcement authority. EPA also retains its authority under sections 3007, 3008, 3013, 3017, and 7003. The standards and

[42] See ''Guidance for Risk Characterization,'' accessible at *http://www.epa.gov/OSA/spc/2riskchr.htm.*

[43] See the docket for the documents ''Response to Comments on the Solvent Contaminated Wipes 2003 Screening Risk Analysis'' and ''Response to Comments on the Solvent Contaminated Wipes 2009 Risk Analysis: Risk-Based Mass Loading Limits.''

requirements for state authorization are found at 40 CFR part 271.

Prior to enactment of the Hazardous and Solid Waste Amendments of 1984 (HSWA), a state with final RCRA authorization administered its hazardous waste program entirely in lieu of EPA administering the federal program in that state. EPA did not issue permits for any facilities in that state, since the state was now authorized to issue RCRA permits. When new, more stringent federal requirements were promulgated, the state was obligated to enact equivalent authorities within specified time frames. However, the new requirements did not take effect in an authorized state until the state adopted the equivalent state requirements.

In contrast, under RCRA section 3006(g) (42 U.S.C. 6926(g)), which was added by HSWA, new requirements and prohibitions imposed under HSWA authority take effect in authorized states at the same time that they take effect in unauthorized states. While states must still adopt HSWA related provisions as state law to retain final authorization, EPA implements the HSWA provisions in authorized states, including the issuance of any permits pertaining to HSWA requirements, until the state is granted authorization to do so.

Authorized states are required to modify their programs only when EPA promulgates federal requirements that are more stringent or broader in scope than existing federal requirements.[44] RCRA section 3009 allows states to impose standards more stringent than those in the federal program (see 40 CFR 271.1). Therefore, authorized states may, but are not required to, adopt federal regulations, both HSWA and non-HSWA, that are considered less stringent than previous federal regulations.

B. Effect on State Authorization

Today's rule amends the definition of solid waste to conditionally exclude solvent-contaminated reusable wipes and the definition of hazardous waste to conditionally exclude solvent-contaminated disposable wipes. These definitions were promulgated under the authority of sections 2002, 3001–3010 and 7004 of the Solid Waste Disposal Act of 1965 (later amended by RCRA and by HSWA). Today's rule amends the application of the RCRA Subtitle C ''base'' program to certain wastes and is thus a non-HSWA rule.

Because, today's conditional exclusions are not HSWA regulations, today's regulatory provisions are not immediately effective in authorized states. They are only immediately applicable in those states and territories that do not have final authorization for the base (non-HSWA) portion of the RCRA program, including Indian country.

Today's rule includes requirements and conditions that are less stringent than those required under the base RCRA hazardous waste program. Thus, states, except as described below, are not required to adopt the conditional exclusions. However, the Agency encourages states to adopt this rule as soon as possible to reduce regulatory burden on businesses and maximize national consistency, while maintaining protection of human health and the environment. In addition, if a state were, through implementation of state waiver authorities or other state laws, to allow compliance with the provisions of today's rule in advance of adoption or authorization, EPA would not generally consider such implementation a concern for purposes of enforcement or state authorization.

Of course, states cannot implement requirements that are less stringent than the federal requirements in today's rule. As we stated in the November 2003 proposal, the 1994 Shapiro memo established federal policy with regard to solvent-contaminated wipes that deferred the determination of their regulatory status to the states and EPA regions (68 FR 65617). This deferral has resulted in the development of various state programs for reusable wipes. Today's conditional exclusion for reusable wipes is generally consistent with many of these state policies; however, some conditions required by today's final rule may be more stringent than some existing state programs. As a result, authorized states whose programs include less stringent requirements than today's final rule are required to modify their programs to maintain consistency with the federal program per the provisions of 40 CFR 271.21(e). In addition, any states that delineate their program for reusable wipes in guidance documents or interpretive letters will need to promulgate enforceable regulations, as required by 40 CFR 271.7. Because today's rule is a non-HSWA rule, the current state requirements remain in place until the state adopts the equivalent to these federal requirements.

C. Enforcement

Under today's final rule, reusable wipes are excluded from the definition of solid waste and disposable wipes are excluded from the definition of hazardous waste provided certain conditions are met. To retain the conditional exclusion, each party operating under the conditional exclusion is responsible for ensuring that all the conditions in the final rule are met. Failure to maintain all of the required conditions at all times will result in loss of the exclusion. Facilities taking advantage of the conditional exclusion that fail to meet one or more of the conditions may be subject to enforcement action, and the solvent-contaminated wipes will be considered to be hazardous waste from the point of their generation (*i.e.*, from the point when the generator finished using them). EPA could choose to bring an enforcement action under RCRA section 3008(a) for violations of the hazardous waste requirements. States could choose to enforce for violations of state hazardous waste requirements under state authorities.

As with any violation, EPA and authorized states have enforcement mechanisms available that range in severity. In addition, EPA and authorized states have flexibility in applying these mechanisms to the various responsible parties as appropriate to the specific circumstances. Some of the enforcement mechanisms include sending a notice of violation, ordering that the situation be remedied, or assessing fines or other penalties as appropriate.

Generators, transporters, laundries, dry cleaners, disposal, combustion, or other handling facilities claiming the conditional exclusions must be able to demonstrate to the appropriate regulatory agency that the applicable conditions are being met. In an enforcement action, the facility claiming the conditional exclusion bears the burden of proof pursuant to 40 CFR 261.2(f), to demonstrate conformance with the conditions specified in the regulation.

Additionally, the conditional exclusions in today's rule do not affect the obligation to promptly respond to and remediate any releases of solvents and wipes managed within the conditional exclusion. If a hazardous solvent is spilled or released, then the solvent would be discarded. Any management of the released material not in compliance with applicable federal and state hazardous waste requirements could result in an enforcement action. For example, a person who spilled or

[44] EPA notes that decisions regarding whether a state rule is more stringent or broader in scope than the federal program are made when the Agency authorizes state programs.

otherwise released a hazardous solvent, and failed to immediately clean it up, could potentially be subject to enforcement for illegal disposal of the hazardous waste. The hazardous waste could also potentially be addressed through enforcement orders, such as orders under RCRA sections 3013 and 7003.

XI. Administrative Requirements for This Rulemaking

A. Executive Order 12866—Regulatory Planning and Review and Executive Order 13563—Improving Regulation and Regulatory Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), this action is a ''significant regulatory action'' because it raises novel legal or policy issues under section 3(f)(4) of Executive Order 12866. Accordingly, EPA submitted this action to the Office of Management and Budget (OMB) for review under Executive Orders 12866 and 13563 (76 FR 3821, January 21, 2011) and any changes made in response to OMB recommendations have been documented in the docket for this action.

In addition, EPA prepared an analysis of the potential costs and benefits associated with this action. This analysis is contained in ''Regulatory Impact Analysis for Conditional Exclusions from Solid and Hazardous Waste for Solvent-Contaminated Wipes.'' A copy of the analysis is available in the docket for this action and the analysis is briefly summarized here.

Entities that may be affected by the final rule include facilities that use reusable and/or disposable wipes in conjunction with solvents that are hazardous wastes when discarded. EPA identified approximately 90,549 facilities in 13 economic sub-sectors (based on five- or six-digit North American Industry Classification System (NAICS) codes)[45] that generate solvent-contaminated wipes and, therefore, will be affected by the final rule. This estimate includes 576 large quantity generators (LQGs) and 89,973 small quantity generators (SQGs). Collectively, these LQGs and SQGs generate approximately 2.2 billion solvent-contaminated wipes each year. Note that conditionally exempt small quantity generators (CESQGs) are conditionally exempt from 40 CFR parts 262 through 270 provided they comply with the requirements at 40 CFR 261.5. Therefore, we have assumed that they are not affected by the final rule.

Handlers of solvent-contaminated wipes are also affected by today's rule. These include solid waste management facilities that manage solvent-contaminated disposable wipes once they have been discarded (*i.e.*, hazardous and non-hazardous landfills/combustors), and industrial laundries and dry cleaners that clean solvent-contaminated reusable wipes. EPA identified eight industries (based on five- or six-digit NAICS codes) with facilities that handle solvent-contaminated wipes and, therefore, will be affected by the final rule. In particular, EPA estimates that approximately 3,730 solid waste management facilities and 359 industrial laundries and dry cleaners will be affected by the final rule.

Excluding non-monetary benefits, EPA estimates that the final rule will result in a net *savings* of approximately $18.0 million per year (2011 dollars). The net savings of $18.0 million per year factored in the annualized *total one-time cost* of the final rule across all facilities of approximately $123,000 to $164,000 in the first-year after promulgation of the final rule, *total annual costs* of approximately $6.4 million and *total annual savings* of approximately $24.4 million across all affected entities. EPA evaluated these costs and savings over a 10-year period.

The primary benefit of the final rule is the annual savings associated with RCRA regulatory compliance. However, EPA also anticipates that the final rule will result in other expected benefits, including (1) pollution prevention and waste minimization benefits, (2) fire safety benefits, and (3) potential benefits to industrial laundries and dry cleaners by excluding solvent-contaminated reusable wipes from the definition of solid waste—that is, removing the ''waste'' label. The other expected benefits of the final rule are estimated at between $3.7 million and $9.9 million per year (2011 dollars).

Pollution prevention and waste minimization benefits of the final rule take the form of avoided future purchases of virgin solvents if captured spent solvent ''free liquids'' are recycled.[46] The final rule excludes disposable wipes from hazardous waste requirements, provided the solvent-contaminated wipes contain no free liquids. Therefore, the final rule provides a strong economic incentive for generators to remove free liquid spent solvent, which is then made available to be recycled. Furthermore, under the hazardous waste regulations, LQGs may have had only 90 days to accumulate solvent-contaminated wipes. However, under the final rule, generators may accumulate solvent-contaminated wipes, along with free liquids, for up to 180 days. Longer accumulation periods increase the potential for a generator to accumulate sufficient amounts of spent solvent to make recycling more economically feasible. The total annual pollution prevention and waste minimization benefits are estimated to be between $0.21 million and $0.96 million.

Fire safety benefits of the final rule are attributed to several specific rule conditions, including (1) wipes must be stored in non-leaking, closed containers, which ensures that the wipes are contained and are not exposed to the environment and potential ignition sources; (2) wipes must be labeled ''Excluded Solvent-Contaminated Wipes,'' which ensures that the generators, handlers, as well as other personnel, such as state and EPA enforcement, are aware of the contents of the containers and can handle them appropriately (*e.g.*, not store the wipes next to an open flame); and (3) wipes must not contain free liquids, which reduces the likelihood of fire ignition. The total annual fire safety benefits from reusable wipes are estimated to be between $0.23 million and $2.31 million.[47]

Excluding reusable wipes from the definition of solid waste—that is, removing the label of ''waste,'' may increase the economic value of a product. The total annual benefits from these impacts are estimated to be between $3.3 million and $6.6 million per year.

Adding the net savings to the other expected benefits, the net benefits of the final rule are estimated at between $21.7 million and $27.8 million per year (2011 dollars).

B. Paperwork Reduction Act (Information Collection Request)

The information collection requirements in this rule will be submitted for approval to OMB under the *Paperwork Reduction Act*, 44 U.S.C.

[45] NAICS is the standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy.

[46] EPA only estimates this benefit for disposable wipes, because reusable wipes are already required to contain no free liquids under most existing state programs.

[47] Solvent-contaminated disposable wipes are currently subject to the hazardous waste requirements, including the hazardous waste container standards in 40 CFR 265 Subpart I. Therefore, EPA expects there would be no incremental fire safety benefits associated with solvent-contaminated disposable wipes from this rule.

3501 *et seq.* The information collection requirements are not enforceable until OMB approves them. The information collection request has been updated since the November 2003 proposed rule to reflect the final rule requirements and to respond to public comments.

The information requirements established for this action are voluntary to the extent that the conditional exclusions being finalized today are voluntary and represent an overall reduction in burden, as compared with the alternative information requirements associated with managing the solvent-contaminated wipes as hazardous waste. The information requirements help ensure that (1) entities operating under today's rule are held accountable to the applicable requirements; and (2) inspectors can verify compliance with the conditions of today's rule when needed.

For the information collection requirements applicable to conditionally excluded solvent-contaminated wipes, the aggregate annual burden to respondents over the three-year period covered by this ICR is estimated to be 65,064 hours, with a cost to affected entities of $3,384,436. This cost includes an estimated labor cost of $1,604,680 and an operation and maintenance cost of $1,779,756, which includes the purchase of container labels. EPA estimates that the burden savings under today's rule as compared to the existing hazardous waste requirements will be 14,497 hours and $557,706 per year. Thus, the *net* impacts under the final rule are estimated to be 50,567 hours and $2,826,730 per year. There are no capital/startup costs and no costs for purchases of services. There are no reporting requirements associated with today's rule. EPA estimates that 67,851 respondents will be required to keep records. The average annual recordkeeping burden is estimated to be almost one hour per respondent. This estimate includes time for reading the regulations, affixing labels to containers, and maintaining at the site specified documentation that the excluded solvent-contaminated wipes are being managed in accordance with today's final rule. There are no administrative costs to the Agency. Burden is defined at 5 CFR 1320.3(b).

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations in 40 CFR are listed in 40 CFR part 9. When this ICR is approved by OMB, the Agency will publish a technical amendment to 40 CFR part 9 in the **Federal Register** to display the OMB control number for the approved information collection requirements contained in this final rule.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of today's rule on small entities, small entity is defined as (1) a small business as defined by the Small Business Administration's (SBA) regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and, (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. The small entities that are affected by this final rule include entities that use or handle solvent-contaminated reusable and disposable wipes. EPA's analysis estimates that 57,786 small entities are located in states that are expected to adopt the final rule, which includes 55,327 generators and 2,459 handlers. We have determined in our ''Regulatory Impact Analysis for Conditional Exclusions from Solid and Hazardous Waste for Solvent-Contaminated Wipes'' that the economic impacts of the final rule on the smallest of the small entities, firms with only one employee, range from only 0.01 percent to 0.54 percent of total annual revenue. These results are well below the one percent screening criterion used to identify firms that might experience significant economic impacts. Furthermore, all affected entities generating or handling solvent-contaminated *disposable* wipes are expected to incur savings as a result of the final rule.

Although this final rule will not have a significant economic impact on a substantial number of small entities, EPA nonetheless has tried to reduce the impact of this rule on small entities. Today's rule establishes consistent regulations for reusable wipes with the intention that these requirements complement existing industry practices and thus minimize any additional burden on small entities. Additionally, EPA plans to develop and/or support user-friendly compliance assistance tools, such as the summary chart available in the docket for today's rule, which provides an overview of the exclusion for reusable wipes and disposable wipes.

D. Unfunded Mandates Reform Act

This action contains no federal mandates under the provisions of Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), 2 U.S.C. 1531–1538 for state, local, or tribal governments or the private sector. The action imposes no enforceable duty on any State, local or tribal governments or the private sector. Therefore, this action is not subject to the requirements of sections 202 or 205 of the UMRA.

This action is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments. Under the final rule, EPA is modifying its hazardous waste management regulations under RCRA to (1) conditionally exclude from the definition of hazardous waste solvent-contaminated disposable wipes and (2) conditionally exclude from the definition of solid waste solvent-contaminated reusable wipes. The conditional exclusions are considered less stringent than the current Federal regulations because they exclude certain materials now regulated by RCRA Subtitle C. Thus, authorized states are not required to adopt the final rule, provided their program is at least as stringent as the federal program. In addition, even if the final rule is adopted by their state, generators of solvent-contaminated wipes may opt to continue to manage such wipes under the current federal hazardous waste regulations rather than under the conditional exclusions.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. RCRA, (42 U.S.C. 6901 to 6992k) establishes the relationship between states and the federal government with respect to

hazardous waste management, including provisions for authorized state hazardous waste programs (42 U.S.C. 6926, section 3006) and retention of state authority (42 U.S.C. 6929, section 3009). Under section 3009 of RCRA, states and their political subdivisions may not impose requirements less stringent for hazardous waste management than the federal government. Therefore, although the final rule prevents state and local laws that are less stringent with respect to management of solvent-contaminated wipes, the final rule does not have federalism implications beyond those already established by RCRA. Thus, Executive Order 13132 does not apply to this action.

In the spirit of Executive Order 13132, and consistent with EPA policy to promote communications between EPA and State and local governments, EPA specifically solicited comment on the proposed action from State and local officials.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

Subject to the Executive Order 13175 (65 FR 67249, November 9, 2000) EPA may not issue a regulation that has tribal implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the federal government provides the funds necessary to pay the direct compliance costs incurred by tribal governments, or EPA consults with tribal officials early in the process of developing the proposed regulation and develops a tribal summary impact statement.

EPA has concluded that this action may have tribal implications. However, it will neither impose substantial direct compliance costs on tribal governments, nor preempt tribal law. This action may have tribal implications to the extent that generating facilities on tribal lands use solvents on wipes or handling facilities located on tribal lands may receive solvent-contaminated wipes.

EPA did not consult directly with representatives of tribal governments early in the process of developing this regulation; however, EPA did conduct extensive outreach with the public, which included two public comment periods and a public meeting. Additionally, we specifically solicited comment on the November 2003 proposed rule from tribal officials.

G. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks

This action is not subject to EO 13045 (62 FR 19885, April 23, 1997) because it is not economically significant as defined in EO 12866, and because the Agency does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. This action's health and risk assessments are contained in section III.D.

H. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution, or Use

This action is not a ''significant energy action'' as defined in Executive Order 13211 (66 FR 28355, May 22, 2001), because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. Further, we have concluded that this rule is not likely to have any adverse energy effects because the rule addresses management of solvent-contaminated wipes under RCRA and will not have significant impacts on energy supply, distribution, or use.

I. National Technology Transfer and Advancement Act of 1995

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (''NTTAA''), Public Law 104–113, 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (*e.g.*, materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This rulemaking includes environmental monitoring or measurement consistent with the Agency's Performance Based Measurement System (''PBMS''). For certain conditions, such as today's container standard, EPA has decided not to require the use of specific, prescribed technical standards. Rather, the rule will allow the use of any method that meets the prescribed performance criteria. The PBMS approach is intended to be more flexible and cost-effective for the regulated community; it is also intended to encourage innovation and improved data quality. EPA is not precluding the use of any method, whether it constitutes a voluntary consensus standard or not, as long as it meets the performance criteria specified.

The rulemaking does involve a technical standard for one condition of today's exclusions. For the definition of ''no free liquids,'' EPA has determined that the Paint Filter Liquids Test, (SW–846, Method 9095B) is most appropriate to determine whether solvent-contaminated wipes contain no free liquids (although the no free liquids standard may also be determined using another standard or test method as defined by an authorized state). This test is included in EPA's official compendium of analytical and sampling methods entitled ''Test Methods for Evaluating Solid Waste, Physical/Chemical Methods'' (EPA Publication SW–846), which have been evaluated and approved for use in complying with the RCRA regulations.[48] The Paint Filter Liquids Test was specifically chosen because it is currently being used by the majority of states to determine whether solvent-contaminated wipes contain free liquids and is also the test used to implement the restrictions on disposal of free liquids in the MSWLF regulations (40 CFR 258.28). The Paint Filter Liquids Test is also simple and inexpensive to perform and typically produces clear results.

J. Executive Order 12898: Environmental Justice

Executive Order (EO) 12898 (59 FR 7629 (Feb. 16, 1994)) establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

EPA has determined that this final rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it does not affect the level of protection provided for human health or the environment. Specifically, EPA has concluded that today's action will not result in disproportionate adverse impacts to the communities of concern because (1) the results of the 2012 final risk analysis demonstrate that solvent-contaminated wipes and sludge from laundries and dry cleaners disposed in MSWLFs do not pose significant risk to human health and the environment; (2) the conditions of the rule (such as

[48] *http://www.epa.gov/epawaste/hazard/testmethods/sw846/index.htm.*

ensuring that solvent-contaminated wipes are stored in non-leaking, closed containers and that such wipes contain no free liquids at the point of being sent for disposal or cleaning) address potential hazards during accumulation, storage, transportation, and handling; and (3) we do not anticipate any increased affects from transportation as, to the extent this rule changes the destination of solvent-contaminated wipes, they would likely be disposed with other solid wastes and thus, transported along well established solid waste hauler routes.

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register.** This action is not a ''major rule'' as defined by 5 U.S.C. 804(2). This rule will be effective January 31, 2014.

List of Subjects

40 CFR Part 260

Environmental protection, Hazardous waste.

40 CFR Part 261

Environmental protection, Hazardous waste, Solid waste.

Dated: July 22, 2013.

Gina McCarthy,

Administrator.

For the reasons set out in the preamble, parts 260 and 261 of title 40, Chapter I of the Code of Federal Regulations, are amended as follows:

PART 260—HAZARDOUS WASTE MANAGEMENT SYSTEM: GENERAL

■ 1. The authority citation for part 260 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6921–6927, 6930, 6934, 6935, 6937, 6938, 6939, and 6974.

Subpart B—Definitions

■ 2. Section 260.10 is amended by adding in alphabetical order the definitions of ''No free liquids,'' ''Solvent-contaminated wipe,'' and ''Wipe'' to read as follows:

§ 260.10 Definitions.

* * * * *

No free liquids, as used in 40 CFR 261.4(a)(26) and 40 CFR 261.4(b)(18), means that solvent-contaminated wipes may not contain free liquids as determined by Method 9095B (Paint Filter Liquids Test), included in ''Test Methods for Evaluating Solid Waste, Physical/Chemical Methods'' (EPA Publication SW–846), which is incorporated by reference, and that there is no free liquid in the container holding the wipes. No free liquids may also be determined using another standard or test method as defined by an authorized state.

* * * * *

Solvent-contaminated wipe means—

(1) A wipe that, after use or after cleaning up a spill, either:

(i) Contains one or more of the F001 through F005 solvents listed in 40 CFR 261.31 or the corresponding P- or U-listed solvents found in 40 CFR 261.33;

(ii) Exhibits a hazardous characteristic found in 40 CFR part 261 subpart C when that characteristic results from a solvent listed in 40 CFR part 261; and/or

(iii) Exhibits only the hazardous waste characteristic of ignitability found in 40 CFR 261.21 due to the presence of one or more solvents that are not listed in 40 CFR part 261.

(2) Solvent-contaminated wipes that contain listed hazardous waste other than solvents, or exhibit the characteristic of toxicity, corrosivity, or reactivity due to contaminants other than solvents, are not eligible for the exclusions at 40 CFR 261.4(a)(26) and 40 CFR 261.4(b)(18).

* * * * *

Wipe means a woven or non-woven shop towel, rag, pad, or swab made of wood pulp, fabric, cotton, polyester blends, or other material.

* * * * *

PART 261—IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

■ 3. The authority citation for part 261 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6921, 6922, 6924(y), and 6838.

Subpart A—General

■ 4. Section 261.4 is amended by adding paragraphs (a)(26) and (b)(18) to read as follows:

§ 261.4 Exclusions.

(a) * * *

(26) Solvent-contaminated wipes that are sent for cleaning and reuse are not solid wastes from the point of generation, provided that

(i) The solvent-contaminated wipes, when accumulated, stored, and transported, are contained in non-leaking, closed containers that are labeled ''Excluded Solvent-Contaminated Wipes.'' The containers must be able to contain free liquids, should free liquids occur. During accumulation, a container is considered closed when there is complete contact between the fitted lid and the rim, except when it is necessary to add or remove solvent-contaminated wipes. When the container is full, or when the solvent-contaminated wipes are no longer being accumulated, or when the container is being transported, the container must be sealed with all lids properly and securely affixed to the container and all openings tightly bound or closed sufficiently to prevent leaks and emissions;

(ii) The solvent-contaminated wipes may be accumulated by the generator for up to 180 days from the start date of accumulation for each container prior to being sent for cleaning;

(iii) At the point of being sent for cleaning on-site or at the point of being transported off-site for cleaning, the solvent-contaminated wipes must contain no free liquids as defined in § 260.10 of this chapter.

(iv) Free liquids removed from the solvent-contaminated wipes or from the container holding the wipes must be managed according to the applicable regulations found in 40 CFR parts 260 through 273;

(v) Generators must maintain at their site the following documentation:

(A) Name and address of the laundry or dry cleaner that is receiving the solvent-contaminated wipes;

(B) Documentation that the 180-day accumulation time limit in 40 CFR 261.4(a)(26)(ii) is being met;

(C) Description of the process the generator is using to ensure the solvent-contaminated wipes contain no free liquids at the point of being laundered or dry cleaned on-site or at the point of being transported off-site for laundering or dry cleaning;

(vi) The solvent-contaminated wipes are sent to a laundry or dry cleaner whose discharge, if any, is regulated under sections 301 and 402 or section 307 of the Clean Water Act.

(b) * * *

(18) Solvent-contaminated wipes, except for wipes that are hazardous waste due to the presence of trichloroethylene, that are sent for

disposal are not hazardous wastes from the point of generation provided that

(i) The solvent-contaminated wipes, when accumulated, stored, and transported, are contained in non-leaking, closed containers that are labeled ''Excluded Solvent-Contaminated Wipes.'' The containers must be able to contain free liquids, should free liquids occur. During accumulation, a container is considered closed when there is complete contact between the fitted lid and the rim, except when it is necessary to add or remove solvent-contaminated wipes. When the container is full, or when the solvent-contaminated wipes are no longer being accumulated, or when the container is being transported, the container must be sealed with all lids properly and securely affixed to the container and all openings tightly bound or closed sufficiently to prevent leaks and emissions;

(ii) The solvent-contaminated wipes may be accumulated by the generator for up to 180 days from the start date of accumulation for each container prior to being sent for disposal;

(iii) At the point of being transported for disposal, the solvent-contaminated wipes must contain no free liquids as defined in § 260.10 of this chapter.

(iv) Free liquids removed from the solvent-contaminated wipes or from the container holding the wipes must be managed according to the applicable regulations found in 40 CFR parts 260 through 273;

(v) Generators must maintain at their site the following documentation:

(A) Name and address of the landfill or combustor that is receiving the solvent-contaminated wipes;

(B) Documentation that the 180 day accumulation time limit in 40 CFR 261.4(b)(18)(ii) is being met;

(C) Description of the process the generator is using to ensure solvent-contaminated wipes contain no free liquids at the point of being transported for disposal;

(vi) The solvent-contaminated wipes are sent for disposal

(A) To a municipal solid waste landfill regulated under 40 CFR part 258, including 40 CFR 258.40, or to a hazardous waste landfill regulated under 40 CFR parts 264 or 265; or

(B) To a municipal waste combustor or other combustion facility regulated under section 129 of the Clean Air Act or to a hazardous waste combustor, boiler, or industrial furnace regulated under 40 CFR parts 264, 265, or 266 subpart H.

* * * * *

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